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THE LATE JOHN BENSON, M.B.E.

#### MEMOIR OF

#### THE LATE JOHN BENSON, M.B.E.

 $\Lambda$  TIDE which never returns has taken from us one whose death will be mourned by not only Cumberland, which was justly more than proud of her son, but in all spheres where the English language is spoken.

Mr. Benson was born September 3rd, 1864, the eldest son of the late Mr. Thomas Benson, Unthank, Langwathby, Cumberland, who had a family of four sons and two daughters. The Bensons, of Unthank, are proud of their yeoman ancestry, and one of their stock was Primate of England.

John was brought up at Unthank, going as a lad first to a local school, afterwards to a high school at Penrith. From his earliest days he took a keen interest in everything connected with the farm livestock, including the cattle, always realising the importance and value of general purpose Dairy Shorthorn.

In the autumn of 1887 Professor James Long gave a lecture on dairying at Penrith which young Mr. Benson attended. He was so much impressed by this lecture, and so fully realised how much there was to learn in connection with dairy matters, that he went as a pupil on Professor Long's farm in Hertfordshire, where he remained for some time. From the observations he made and the knowledge he gleaned during the many visits he made to the best managed dairies he went to see, his keen observance, fine intelligence, and foresight indicated to him that there was, there and then, a field of work of which only the fringe was touched.

The British Dairy Farmers' Association, after due consideration, decided to award Diplomas of proficiency in the theory and practice of dairying, Certificates only having been given previously. Mr. John Benson was the first person to secure one of these.

At this time the British Dairy Farmers' Association decided that the time had come when they should establish a School for Dairying on lines that would be comprehensive, practical, and of advantage to the Cheesemakers in every part of England. A site and buildings were obtained at Aylesbury, where the British Dairy Institute found its first home.

Mr. Benson was appointed manager, where for six-and-a-half years people from all parts of the country were trained and taught in a manner that each have had cause to gratefully remember.

In 1895, Mr. Benson, who was succeeded by his most capable younger brother, the late Miles Benson, resigned his post at Aylesbury on his acceptance of the directorship of the Midland Dairy Institute, Kingston, Derby, founded by the counties of Notts, Derby, Leicester, and the Lindsey Division of Lincolnshire, where he remained till 1899, when he had made up his mind to devote his time to farming and commercial pursuits.

Mr. Benson visited from time to time every part of Europe where the Industry of the Dairy is being carried out, while Jamaica has had the advantage of his advice and experience.

As a member of the Council of the British Dairy Farmers' Association, also of the Education, Conference, Selection of Judges, and British Dairy Institute Joint Committees, the loss of his advice and guidance will be keenly felt by the oldest and most experienced members

During the War Mr. Benson rendered the Ministry of Agriculture a great amount of valuable advice and personal assistance in connection with the many matters that the Ministry had to deal with regarding milk, butter, and cheese.

As an Examiner, either for the National Diploma in Dairying—a post he held with the exception of two years from 1902 to 1923, when he resigned unfortunately owing to ill-health—or at the many important examinations, including those of the British Dairy Farmers' Association, he conducted elsewhere, even those he failed, even if disappointed, were satisfied that justice had been done to them; while as a judge of butter, cheese or any farm produce at the "Royal," "Dairy," or any of the great shows, I doubt if he had an equal. There are few men who will be remembered or thought of with the same respect and affection by those whom he taught, advised, or examined in the dairy world than our old and valued friend.

In the midst of the lakes and fells in the county he loved so well the rod and gun were a joy and a pleasure to as fine a type of a man and an Englishman as ever the writer knew.

#### WHERE WE ARE

#### AND

#### WHERE WE OUGHT TO BE.

By ROBERT SHANKS.

The many vicissitudes farmers of all grades had to encounter since the slump of 1920, have hampered and curtailed his activities in many directions. Seasons and markets have gone against him, and faced with either increased rent or compulsory purchase of his farm to secure a home, the outlook is not cheering. Prospects give no indication that the future will be any better than the last decade.

Circumstances have thrown him into pecuniary difficulties, and the wherewithal to extend and develop is not forthcoming. Arable farming is doomed except on the most productive soils. Certain areas or districts give good crops one year, but there is always the uncertainty of partial or total failure. At the present moment—on land of this sort—the farmer cannot take these risks, and the agricultural returns show only too clearly the one way out. With the world looking to Great Britain as consumer of her surplus agricultural produce, the arable farmer, grazier of fat cattle, pig fatteners, cheese and butter makers, fruit growers and the produce of the poultry vard, are all battling against highly organised importations. The tendency to fall back upon the production of milk for immediate consumption. is, at the present moment, the best way out. The fortnightly cheque is the quickest return on the farm. It is from the dairy farmers' point of view I wish to state "Where We Are and Where We Ought to Be."

#### Buildings.

It often happens when a farmer decides to start milk production, the nature and construction of his building is a handicap to the housing of his stock. It is surprising what can be done in the way of stall construction with the existing hovels and barns. There are many opportunities to-day of obtaining information as to the best form of stall for the dairy cow. The expense of constructing what is recognised the best type for comfort and cleanliness, is no more and probably less, than what it would cost to erect fittings of an unsuitable character. The Ministry of Agriculture publish a leaflet on the subject, the contents of which contain many of the suggestions thrown out by the late John Spier and Primrose McConnell, B.Sc., years before the Ministry began to spend so much money on educating the farmer.

There are always to be seen the latest in construction on some gentlemen's holdings and County Council farms, but these cannot come within the possibility of the average farmer, on a farm struggling for an existence, and a landlord unable to assist, no matter how willing the spirit. I had the opportunity of looking through the buildings of adjoining farms recently, one quite modern in construction, the other what no doubt was considered the last word thirty or forty years ago. The advance was so marked that anyone could detect at once the extraordinary development and endeavour to keep right up to date. Twenty years ago we heard much of "air space." but this fad is exploded. We are now reduced to the three essentials, viz., cleanliness, ventilation and light, and we can have these in a cramped, inconvenient cowstall. The fixing of a cooling shed, conveniently situated, with facilities for washing and scalding, are essential, but often of an undesirable character. What the

#### EQUIPMENT

ought to be is subject to matter of opinion on some points. What is looked upon as essential—a plentiful supply of water, 56 deg. or less—is in many cases unobtainable. The ideal equipment is a petrol engine to pump water, work small freezer, and drive dynamo for electric light. A milking machine could be attached, but all this is only within the reach of a wealthy man, or the most flourishing dairy-farmers producing not less than 100 gallons of milk daily. The freezing plants must be made cheaper. Electric light, hung well above the cows, throws the illumination to where it is wanted, and is a wide contrast to the dim, ordinary paraffin lamp so common in use, giving but a glimmer to show the way about.

The MILKING MACHINE has a few advocates, and these advocates must be specially lucky in having employees sufficiently interested and capable to produce the best results. There is no getting away from the fact that comparatively few are working, and more are standing idle or have been dismantled. From what I have seen of these in actual working-my own dairy included-the numb complicated receiver which has to be carted from cow to cow, equipped with pulsator, cups, tubing, &c., is an elaborate affair compared with the plain milking pail. I know which I prefer for reliability and minimum of washing. The simpler the equipment the better, and all utensils in use should be smooth and as free from crevices and joints as The block tinned pails now on the market are the ideal. possible. The domed milking pails have their drawbacks. Whether these will outweigh the advantages time alone will tell. Year 1925 Dairy Show gave us several specimens of coolers with small bottling equipment attached. These fitments were an indication of the trend of events for the advancement of clean milk production. A striking exhibit was a compact washing, steaming and bottling rinsing plant suitable for the ordinary farm, all at the price of £55.

The purchase of a

#### DAIRY COW

in the ordinary market is invariably a haphazard adventure. There are only appearances to go by and these can be deceptive. The time is approaching when the owners of all milch cows exposed for sale will have to give authentic milk records. We are a long way from this ideal yet, as not more than 6 per cent. of the animals are recorded. Such a stipulation is creditable to the vendor and a guide to the purchaser. Under this ruling "dud" animals would be fattened off, and not exposed in the dairy market to mislead the new owner.

#### MILK RECORDING

has, is, and will do much to increase the milk production of a herd. if authentic lines of procedure are adopted. Some of us were advocates of this twenty years or more before the Ministry of Agriculture decided to support the movement. North of the Border they have had a systematic method of checking for twenty years, inaugurated largely by the energies of the late John Spier. Your Association offered a Gold Medal for milk recording more than thirty-five years ago. This was won by Primrose McConnell, of "Note Book," fame, a Scotchman still to the fore, and farming in Essex. The low percentage of cows recorded—certainly not more than 6 per cent.—is due largely to prejudice and expense. The former will break down with the advancement of education in the rising generation. The latter does in many cases appear excessive. I know where a levy of 4s. per cow is misleading. The additional cost of calf-marking, part-time cows and three times milking, runs up the figure to 10s. per full-time cow, and these are the only figures which are of value.

I have seen instances where recording was a detriment to a herd, when exposed for sale. Figures published in a catalogue indicating the annual yield of the animal exposed, which denote only average performance or less, have a prejudicial effect.

There is a feature in connection with most Milk Recording Societies, which has a detrimental effect upon the true development of this movement, viz., the practice of offering cups for all manner of records. This practice cuts at the very root of the object in view. The trophies go to the men who are at the height of production, understand their job, and want no support or encouragement to develop their herd. Milk recording is out to encourage the men with small and unprofitable yields, and guide them along lines which are to their advantage. The class of individual who lifts the cups is usually fairly well represented on the committees, and it is amusing to note how they endeavour to introduce rules and regulations which will apply to their particular advantage. The reckoning and adjusting the many conditions appertaining to the trophies, adds to the work of the recorders. There are never more than 6 to 10 per cent. of the members in the running, and these few are usually at the top every

year. What right have this minority to ask the mass of their fellow members to support a movement for the few herds which are always predominant? If they wish herd competitions, or individual yields with their many intricate conditions, let those who are interested in this form of competition run it apart from the Milk Recording Society and keep these officials out of it.

The Ayrshire men, who are the pioneers of milk recording upon systematic lines, have nothing of this. To prove the falsity of the argument that cup competition is an incentive, we know what the Ayrshire has done at the Dairy Show these last few years. When a Scotchman turns down generous offers of cups, he has sound reasons for doing so. I believe the Ministry of Agriculture, who give grants of £3 and £3 10s. per herd, is against the movement. The innovation has now got such a hold of the Societies that the only way likely to stop the competitions is by refusing to give grants when these are held. This strong line would give the movement a fillip in the right direction.

One of the most important duties of the County Agricultural Organiser and his staff is to give

#### Advice on Feeding

for milk, the work being done through the Recorders of the Milk Recording Societies, collecting the ration data from the farms as they go round. I know of instances where the advice given is looked upon as of more value than the actual recording. We have made rapid progress in this direction the last few years. There is such a plethora of material drawn from experiments, put before us at the present day, that the farmer, as well as the Agricultural Organiser, has much to sift, in order to present what would apply to local conditions, viz.:—

- (1) The quantity of roots—if any—required in a winter ration.
- (2) The respective advantages of cabbages, mangolds, or marrow stem kale.
- (3) If these can be done without when good hay and high quality concentrates are judiciously given.
- (4) The value of the bye-product thrown upon the market from the beet root factories springing up throughout the country. The supply of this will increase, and it is important that a market should be found in the area of the factory. A preferential price is offered to those who supply beet root, of course, with the object of inducing the cultivation of this instead of mangolds. We are faced with the question of deciding between the use of these two foods of a similar character. From present knowledge it appears that beet pulp at £6 or £7 per ton, and given at the ratio of one-seventh to weight of roots in the ration, the results will be the same. This looks a better proposition than growing a questionable crop of mangolds.

The Wilts County Organiser has startled the dairy world by his supposed improved method of milk production—see B. D. F. A. Journal, 1925.

His statements are unusual, and the marvel is, that of all the scientific methods, aided by the routine of practical experience, which has been tested for years by the best authorities, not one has entered upon the line of production advocated by Mr. Boutflour. He may have been fortunate in coupling a few ideas together—drawn from many sources—and rolling the most desirable into one, for the production of milk from a suitable animal. I would not be surprised to learn that much of this knowledge was gained from herdsmen handling heavy-yielding dairy cows. From what little data I have at my disposal, collected on this farm, there is certainly something in it.

The value of water always available for drinking, food seasoned with one per cent. of salt, mineral ingredients supplied to maintain the phosphates drawn from the system by milk production and breeding, are all of recent date. There may be other points, equally important from the scientific point of view, but I write as a farmer.

I have before me as I write, the Report of the Rationing of Dairy Cows. It is a statement drawn up by experts for experts, and the County Agricultural Organisers are already adopting some of the suggestions. It is through these gentlemen we will obtain the information in language we can understand. We are told "that the 'amides' were equivalent in value to half their weight of true protein," and "protein equivalent" represents

$$\frac{\text{Dig. True Prot.} + \text{Dig. Crude Prot.}}{2} = \text{Protein Equiv.}$$

Well may the Intelligence Department of the Ministry remind us "that neither books nor pamphlets, nor even lectures will reach the mass of the farming community. The Ministry is bound to repeat that, broadly speaking, the County Agricultural Organisers, with the Specialist Advisory Officers as their consultants, must do the main work of instructing and guiding the practical farmer. They are the channel by which the stream of knowledge can most surely and easily flow to its destination."

Attempts are being made to simplify the calculation for a balanced ration (Ministry of Agriculture Journal, September, 1925). In my own county the Agricultural Organiser has prepared dozens of rations suitable for the dairy cow, and these are printed in pamphlet form suitable for reference as "he who runs may read." He has recently adopted the method of circularising the farmers, giving the monthly market value of the many feeding stuffs on Mark Lane, plus carriage. The unit values being worked out so as the farmer can judge for himself the cheapest food for his requirements. Starch equivalent, protein equivalent and unit values bamboozle the working farmer. We must admit the monthly notes on feedstuffs and farm values,

with table attached, are usually the most interesting part of the Journal of the Ministry of Agriculture, but comparatively few farmers see this

publication.

Nature's Food.—Grass, fresh air and sunshine have always demonstrated to us that this combination gives us the best and cheapest milk yield. We realise, now, that money spent on judicious handling of pastures gives a better return than a similar expenditure on augmented concentrated diet during the summer months. the soil to show a green turf of wild white clover all the year round. and you have a pasture cattle will closely graze, and give the best return of anything shown to us up to the present. The sowing and encouragement of wild white clover is not nearly so general in the Southern counties as in the North. This may be due to Cockle Park being the pioneer of detailed experiments in this direction, although Professor Somerville showed what could be done on a derelict Down farm, by a dressing of slag. The best farmers North include the expensive seed in their mixture, if only for one year's grazing. The manifold advantages of this, many of we farmers proved, years before Professor Somerville took over Poverty Bottom. Slag is not what it used to be before the War, and we hear many complaints of the lack of return for money expended where it is applied alone. Add kainit and the magic wand works on most soils. I have to-day a lovely carpet of wild white clover on arable land. It did not come out of the seed bag. How your young cattle thrive on such pastures. What a bloom the heifers put on—heifers from selected cows by a "milk" bull. The docile appearance, sleek coats and rounded barrel, fill the eye of the stockman and is one of the greatest delights of a dairy farmer.

Before passing from the heading of feeding one cannot but be impressed by the variety of proprietary foods sold for the milch cow. The number of travellers pestering the farmers to purchase these is legion. I have never come across a traveller yet who was sufficiently well educated to advise the purchaser which were the cheapest foods upon Mark Lane for his particular requirements. I should like to see the day when this type of man is in a position to oust the persuasive seller of proprietary foods. We are advancing in this direction. There are a few isolated cases where the percentage of actual contents is given in addition to the analysis.

When we come to the question of

#### MILK

and its disposal, so much depends upon the locality and its easy access to profitable markets. The competition we have had from the preserved and dried milks of all grades has been severe. The unnecessary and unjustifiable attacks a few medical men make against milk of home production, all tend to deter the public from buying what is undoubtedly the best and cheapest of nature's foods. The National Milk Publicity Council have now got into swing and are not

only tackling the question of milk publicity, but are supporting clean milk competitions all over the country. These efforts are already bearing fruit.

The farmer is often accused of backwardness and indifference of adopting methods which would be to his benefit. The increasing interest and support to clean milk competitions is sufficient proof that there is an earnest desire to keep right up-to-date, and make special efforts to throw a cleaner and more enticing article upon the market. It is particular to emphasise that all this is done in spite of the retailers refusing to give a better price for high grade. Whether your produce shows 5 per cent. or 3 per cent. of fat, sediment test comes out tolerably clean or otherwise, the price given is all the same. Reading between the lines of present tactics, one can see the time, not far off, when the market glut of milk will mean a sifting out of all dairies where cooling, quality and cleanliness are not well up to standard. The progressive and careful producer will keep his market, while his less considerate and careless neighbour will be left with his production, unable to find a market with the distributing firms.

The rapid development of clean milk competitions has been more pronounced than that of milk recording, and it has the advantage of focussing the attention of the public upon the rivalry of the farmers to put upon the market an article of diet second to none, and produced practically at their own doors. There are at least fifty areas taking up this in England and Wales the coming year. The difficulty is that the enthusiasm of the producer in sending in large entries is baffling the organisation to handle the samples of milk sent up for inspection. Your Association is endeavouring to stimulate the desirable interest in clean milk production by offering a Stapleton Cup, with additional money prizes, for an "Inter-County Clean Milk Competition," which cannot operate—according to the conditions—until 1927.

The milk producer is up against a well organised combine of retailers when he comes to the disposal of his produce. The struggle the N.F.U. have put up these last few years, in an attempt to get a fair and reasonable price, well!—we leave it there.

The stumbling block 'twixt producer and retailer is the somewhat crratic supply which is inevitable, where all that is produced is sent off the farm. If some arrangement could be made for the same price to the farmer all the year round, coupled with a safeguard by the retailer for a stipulated quantity only to be sent, with a reasonable margin for fluctuation, this would stabilize confidence with the three parties concerned, viz.:—producer, retailer and consumer.

The farmer must be prepared to handle his surplus milk on the farm, and certainly with a figure of 10d. a gallon or less, it is well worth his while to do so. The simplest method is suckling calves. With the use of a separator, we get cream for butter and a bye-product

which produces the best of pork and bacen. Separated milk is invaluable for growing chicks, fattening poultry or the laying fowl.

The public cannot get over the fact that no trade gives the same service as the delivery of milk, viz., twice daily, seven days a week. A striking feature about delivery is the wide disparity the Wages Board have fixed between the wages of those who work on the farm and the roundsmen who deliver the milk to the consumer. latter has a gentleman's job in comparison to the former. We hear that the restricted hours, coupled with the high rate of pay allotted to the roundsman, is largely responsible for the heavy cost of distribution, and thus widens the gap between the figure received by the farmer and the amount the householder has to pay. The Committee of Food Enquiry has brought to prominence before the public the reason of short measure in milk. The roundsman is responsible for this, so as he can "wangle" his allotment for his own benefit, supplying customers who do not appear on his books. Bottled milk, sealed and stamped at the source of production, has not only the advantages previously referred to, but the consumer is certain of the quantity she pays for, and it is impossible for the roundsman to adopt any dishonest practice. We smile at the innocence of the housewife who buys her bottled milk at a special price, drawn from the milk churn standing round the corner.

We have heard lately of huge glass-lined cylinders being introduced to convey, by motor, milk direct from the farm to the distributing centres in the city. Here it is pasteurised, bottled and sent out to the consumer. This process entails just as much tossing to and fro of the liquid as with the ordinary milk churns. It keeps clear of the transit in a stuffy, foul-smelling railway van. So much handling and pasteurising deteriorates the palatability of the article. A townsman readily detects the difference when he gets the untampered article in the country. Under "Equipment," reference has already been made to the bottling attachment to coolers for use upon the farm. The universal use of these, coupled with improved form of transit, would give the consumer in populous areas, a drink and food which would wet his appetite for more of nature's gifts. It would materially assist all parties if ways and means could be devised whereby twice or at most three times weekly delivery of milk took place. Milk taken direct to the cooler when milking is going on, bottled and sealed, will keep for days in our climate, except on occasional periods. The increased cost of production in this way, including bottle breakages and extra carriage, runs to something like 4d. per gallon. We are anxious the public should create a demand for this at the small extra cost of 1d. per quart. Of course the important point to be impressed upon the user is to draw from the bottles only when required. best results in this direction prevail when the producer does the retailing himself, but comparatively few are so situated to adopt this practice.

The three super grades of nulk upon the market, viz., Grade A, Certified, and T.T. are confusing to the general public, and the cost of producing the last is so expensive and unsatisfactory for the producer that many have two herds; one where the re-acters are sent and still kept as dairy cows! Now the Tuberculous Order is in force the risk of the danger of milk being a carrier of the disease is very remote, in fact it has always been greatly exaggerated by cranks the public listen to.

#### BREED SOCIETIES AND THE DAIRY SHOW.

The wide popularity and importance of your Dairy Show is having a beneficial and educational effect upon the various breed societies where stock is shown. The importance of this exhibit has become so world-wide that the time has now arrived when each breed society must take upon itself the responsibility of inspecting cows shown at the Agricultural Hall. The fact of an animal giving rich or much milk. perhaps both, with the chance of winning in the milking trials or butter tests, ought not to entitle her to compete unless the society decides she is not only typical, but a credit to the breed. The Avrshires are the only ones under this category at present, and we know how the arrangement has worked for the best advertisement the breed has ever had. I happen to know some of the best animals forward could only visit London with the help of their Breed Society. The only class of cow shown which could not be handled as suggested is the non-pedigree Shorthorn, and not all of these entered for competition are registered as foundation cows with the D.S.A. Ever since the "Bledisloe" trophy has been set up for competition, the team of non-pedigree Shorthorns has given the most consistent show of all the breeds. I can picture a team drawn from Cumberland and Westmoreland, but the owners of many magnificent animals could not bear the expense of a trip to London. Propaganda work does not finish with prize money and paper advertising. The best advertisement is selected animals presented in a bunch before the public. I believe the Ayrshire heifers appearing at the Dairy Show last October, eclipsed anything gathered together upon their native heath, and this 400 miles from home. More power to the Ayrshire Society, and other breeds please copy.

The foregoing are a few of the possible suggestions which might happen in the near future. Much depends upon the

#### EDUCATION

of the rising generation of farmers. That education need not be the recognised college course of three years. I know very few farmers who could raise the money, and the question arises whether the education or hard cash of £500 is the better proposition for one who has been brought up in the midst of hard work and practical experience of the farm. The Agricultural Organisers are doing excellent work

in their respective areas by lectures and classes for young men. In most counties the most important work is advice on dairying matters.

The Agricultural Education Committee in many of the counties have either rented or bought a farm for their practical work. Here is where the "rub" comes in. This farm must be made to pay, as is done in many instances, and it is here where we find the agricultural education taking most effect. Three of the most salient points in favour of a paying farm are present, viz.:—

- (1) Plenty of capital at command.
- (2) Proved experiments, showing what is the actual requirements of the soil.
- (3) An agricultural expert charge of the management.

We have thrown on the screen, photos of experimental plots, manure mixtures, seed mixtures, balanced rations by the score, but the one which ought to dominate is the balance sheet of the County Council farm. A creditable showing of this, carries with it enhanced value of the lectures and advice.

We have run through the salient features in connection with the sphere of the dairy farmers; the issues are merely touched upon. We have volumes of material written by experts from every possible angle. Much of it never reaches the farmer, and when it does it is couched in language or illustrated by diagrams which the working farmer is unable to grasp, after a hard day's work upon the farm. The foregoing is but a review of the situation and an attempt to place before your readers, "Where We Are and Where We Ought to Be," viewed through the spectacles of an ordinary farmer.

# HOW TO START PIG-KEEPING (OPEN-AIR).

By GERVAISE TURNBULL.

Some of the estimates of the economic possibility of pig-keeping are over optimistic, and obviously made with a purpose, while pessimists will probably deny that any profit can be made by the small breeder. The following estimate has been carefully drawn up with the help of experts for the writer's own guidance, and, therefore, is perhaps more a conservative one than otherwise. Outdoor conditions and a sound strain are assumed, and that markets and health of stock are reasonably good, as we have good reason to hope for, pork, not bacon, being the objective. A note of—shall we say—subdued optimism has been observable of late when experts have been asked by the writer as to their views on the prospects of the industry, not limiting the field to capitalists, and those who have retired hurt would seem to be mostly inexperienced novices who were, in the boom, lured with the prospects of a booming market for pedigree pigs.

#### EQUIPMENT.

	Lives	tock.							
				£	s.	d.	£	8.	d.
10 gilts of various ages	•••	•••		100	0	0			
1 boar	• • •			12	0	0			
							112	0	0
	Dead	Stock.							
6 farrowing huts and carria	ge			48	0	0			
Wiring, hurdles, and gates		•••	• • •	120	0	0			
Meal shed	•••		•••	10	0	0			
Troughs, tubs, buckets, &c.				10	0	0			
Tools, weighing machine, an		ries		10	0	O			
4 water troughs at 18s. 6d.,	&c.			4	0	0			
							202	0	0
On account food first six m	onths					•	66	0	0
Labour, &c., ditto	•••	•••	•••				20	()	0
Capital re	quired	•••					£400	0	0

Even this fairly moderate estimate need not be all disbursed to start with. Some prefer to have a litter every month or so, others to have most of the litters to come together, saving some labour.

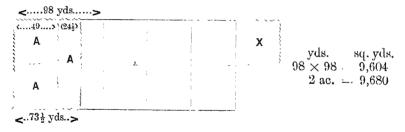
The above £100 would allow for :-

4	in-piggers	at £14	 	 £56
	for service		 	 36
2	weanlings	at £4	 	 8
				£100

It is worth noting that in-pig gilts are generally cheaper in proportion than younger ones of say £6 or £7 at five months old, and that gilts costing £9 or £10, instead of say £7—for less well bred stockare found to be well worth the extra £2 or £3. Five pens would suffice at first, each in-piggery having its own, or those nearly ready for service could be retained five or six weeks by the seller until served, which is not a bad plan in practice.

Purchase of a boar can always then be deferred, even six months if necessary, and the saving of his keep and depreciation will more than balance service fees paid, though if let at 5s. a service he might be a source of profit. It is desirable to avoid winter farrowings, but hardly possible in practice, after the first year, to have none.

Provision is made for eight half-acre pens, though one or two more may be wanted later, and the somewhat novel plan has been adopted of using hurdles for three pens. Though much more expensive, they have great points over wire, and as they can be speedily erected in any position, or for any shape or size of pen to meet present needs, less permanent accommodation in the way of pens may easily be feasible as compared with the usual unsightly and permanent wiring, not only laborious, but causing in time land foulness and poaching, as well as difficulties with a possible hay crop. About the simplest arrangement is as shown below (oblong pens being optional), though a central road has, of course, advantages if more money is available. A circular lay-out, with pens radiating to a central meal shed, is certainly worth study, but they are seldom used, I have found. and involve some poaching of the ground at the centre by pigs and by attendants, even with much shifting of troughs (and therefore are questionable labour savers), also it may be an extra meal shed, as cartage through a pen in winter is often impossible.



(1) Hurdles for 3 1-acre pens	(AA	<b>A</b> ).				
3 sides of 98 yards —	294	yards.				
2  sides of  74  yards = 1  side of  49  yards = 1  yards	148	,,				
1 side of 49 yards $=$	49	,,				
	401	045 7 71	_	$\mathfrak{L}$	s.	d.
	491	= 245 hurdles at		~~		
Wiring for 5 square none		$\operatorname{delivered}$	•••	85	15	()
Wiring for 5 square pens adjoining	637	yards at 1s		91	17	٥
aujoining		yatus at 18	•••	91	11	0
	1,128			117	12	0
If wiring for 8 square pens	,		_			
only	1,078	yards at 1s		53	18	O
,	• 00	e 31 ·				
	ifterer	nce for all wire	• • •	63	14	0
(2) Wiring for 10 pens at at 132 yards per pen	1 200	manda of lu		e e	٠,	(1
at 152 yards per pen	1,020	£ s. d.	• • •	66	IJ	()
(3) Hurdles, 3 pens	491	,, 85 15 0				
Wiring, 7 pens	882	,, 44 2 0				
5, 1		The second secon				
	1,373	£129 17 0	á	$\mathfrak{L}129$	17	O
_		-				

Ten square pens would involve, in above plan, 13½ sides of 98 yards or 1,323 yards net, including gates, allowing for 491 yards of hurdles and 882 of wire; or, following the plan and taking two oblong pens, avoiding an isolated square at X, we again want 1,373 yards. with hurdles as before. Oblong pens, as compared with square, built by themselves, take 245 vards as against 196. Additional square pens to the hurdled section (A A A), will each take 1221 yards, as against 147 yards for oblong pens: 1 single square pen added =  $49 \times 3$  yards, 1 oblong = 98 + 49 yards = 147 yards. As already noticed eight pens is beyond the number required at the start with young gilts. six being recommended by one of our leading pedigree breeders for novices, with 10 slightly older gilts than above allowed for, much, of course, depending on the number which will litter down at the same time. The additional hurdled pens, however, if aspired to, may prove very useful at an early stage if, say, isolation pens are required, and later ten pens may possibly prove a tight fit, especially if the sows pig at short intervals after each other—each then requiring a pen to herself-preferably for some twenty weeks each year, a matter which cannot easily be adjusted entirely to one's wishes it is found in practice, and if provision is made for boar, and fattening pigs of various ages. However, one of the advantages of selling as porkers is that they are cleared off early, and if some open ground can be found for some of the in-pig sows there need be no congestion. Some run of this kind is very desirable, if not essential after a while, as, apart from exercise, pens get very poached in winter and require liming at intervals,

which it is found restores them to a healthy state. Smaller pens than half an acre are quite good for farrowing sows or small lots of pigs, and for sub-division of this kind and all other shifts and temporary expedients hurdles will be found of much use. One acre per sow and produce may, and has been in practice, eventually be found not excessive. The proportion of capital invested in livestock is rather low, but the use of all wire should for ten pens reduce about by £60 the capital outlay on dead stock, and also reduce the depreciation account, while some slight reduction on equipment, if from homemade huts, &c., may perhaps accrue. Another hut or two may even be required, though with a big run one will serve for a number of in-pig sows or many porkers, which points to the economy of some of the pens being over half an acre, a saving, too, in wiring or hurdles, and better for both land and pigs.

# Expenses and Returns First Full Year. Food for one Year.

Meal at £12 10s. per ton or 4 l	bs. 3	d.		£	s.	d.
130 piglings, 5 weeks to weaning, at 9d. = 3s.	9d.			24	7	6
130 porkers, 12 weeks at 3 lbs. per day $= 28s$ .				182	()	()
10 sows, 6 lbs. = 3 stone per week = $19\frac{1}{2}$ cwt.	per a	ann	um			
(8d. per day = £12 3s. per annum)			• • • •	121		
1 boar, 3-4 lbs				7		()
Green food, minerals, and milk			• • •	3	()	()
$Total\ cost\ of\ food\$	• • •			338	7	6
<i>i.e.</i> , 52s. per pig sold (130).						
Sundry Charges.						
Rent and rates, 7-10 acres				16	()	()
Vet. £3, labour £26, carriage £10, sundries £11				50	()	0
Depreciation on £202 dead stock at 10 per cent.	and	15	oer			
cent. on hurdles			•••	24	<b>[</b> ()	()
Ditto on boar at one-third per annum				4	()	()
Litter				5	()	()
Total first year				437	17	6
Deduct for possible reduction of food bill—	£	8.	d.			
130 porkers at 9d	4					
10 sows, 8 months, at $1\frac{1}{2}$ lbs. = £2 2s	21	()	()			
, , , , , , , , , , , , , , , , , , ,				25	17	6
				412	0	ñ
Credit 130 porkers at 100 lbs., at £3 10s	455	()	0	TIA	.,	1)
140 pigs, dung at 2s	14	0	ő			
107			• • •	469	0	()
Profit						Ö
If 16 pigs reared per sow (food at 31s., labour, &c						
add 30 pigs at 36s. profit, extra ditto	.,, 0			54	()	()
/TI						
TOTAL	• • •		t	1111	()	()

The sows have 10 lbs. for 16 weeks (i.e., till weaning at eight weeks), and 4 lbs. for 36 weeks.

The food bill is based on practice, and should prove sufficient for the ordinary breeds, though the quality of the grass and, not least, the strain selected, will influence this, and climatic conditions. Whether, for instance, as much as 11 lbs. can be saved out of the food by grazing as Dr. Crowther, an authority, suggests, is open to question for as much as eight months. It is easy enough with some pigs on some land in summer, or with acorns about, in other cases rough eatage has been found worth 1 lb. of meal, or less, and this with good pigs, but 4 lbs. may be wanted in winter. If litters are very small even more meal could be saved on the item for piglings, while each pig reared over the very moderate estimate of six to seven will materially help the profits, as the cost at birth (Dr. Crowther's recent maximum estimate under the sty system for litters of eight reared to weaning is 26s.) is diminished for big litters, overhead expenses being practically the same, and the turnover for porkers is rapid. Cost up to weaning of extra piglings up to eight pigs per litter is, therefore, put at 3s. each. On the contra side it may be added that. in practice it is difficult to sell the manure in places, and a good deal is wasted, in woodland pens especially, though some arrangement might be come to, for residual values, with a farmer landlord (it is extremely difficult to rent land in the ordinary way). And, again, labour will total considerably more if it is all paid for. Depreciation on the sows will have to be reckoned with before long. the annual amount depending much on individuals. The estimate is not a rosy one, it is true, but more money can at times, as recently, be made by buying and fattening rather than breeding; less outlay is required and less labour.

Again, there may be some loss from diseased carcases or screws, some of which always appear, and on some land it takes over five months to reach the required weight on the outdoor system. The profit is materially affected, in fact, by early maturity and speedy turnover.

If we allow for depreciation in the gilts, after they have appreciated somewhat, we may, perhaps, on our £111 basis make 25 per cent. interest on our original capital of £314; or some 33 per cent. if we go in for all wire. Even then we have allowed nothing for risk.

On the other hand our overhead expenses are very high indeed, as compared with Dr. Crowther's ninth, the hurdles alone increasing depreciation £9 10s. over all wire, and the question seriously arises as to whether the less meal consumed under outdoor conditions and healthier pigs compensates for the higher capital and overhead expenses (perhaps £90 all wire, against £65 for sties) incurred, as compared with sties, supposing labour to be the same in each. There is apt to be, also, considerable difficulty in fattening in the open in winter, and much more dung is wasted. Arable on a large scale is different, but a case like the above should be conned very closely before embarking on

#### DAIRYING IN NORTHERN IRELAND.

By G. S. ROBERTSON, D.Sc., F.I.C.

Dairying in Northern Ireland has for some time played a prominent part in the activities of the North of Ireland farmer. In spite, however, of the unceasing efforts which have been made by the late Department of Agriculture and Technical Instruction for Ireland, the present Ministry of Agriculture for Northern Ireland, and, last but not least, the Agricultural Organisation Society, it must be admitted that Dairying has had a very chequered career. Very different conditions prevail in Northern Ireland from England and Denmark, giving rise to factors which have materially affected the course of the dairying industry. Some explanation of these controlling factors is essential to obtain a true perspective of the problem.

Agriculturally, Northern Ireland is a community of small holders, the majority of the holders owning their farms under the various Land Purchase Acts. As will be seen from the table below, 75 per cent. of the farmers farm holdings of 30 acres or less, and only 11.3 per cent. farm holdings of more than 50 acres.

TABLE 1.

Percentage number of Holdings in each class of Farm.

TAT		٠.	-					per cen	t.
Not e	exceed	$u_{\rm ing}$	; 1 a	cre				19.2)	יו דיי
Abov		and	not	exceedi	ng 5	acres		9.8	Holdings under
,,	5	,,	,,	,,	10	19		13.1 >	30 acres,
**	10	,,	19	7.7	15	,,		11.3	75.8 %
,,	15	,,	,,	**	30	1,		22.4	107 (7 70
17	30	17	,,	,,	50	1,		12.9	
"	50	19	"	,,	100	,,		8.6	
",	100	"	,,	,,	200	,,	• • •	2.1	
,,	200	,,	59	••	500	••		0.6	

The total number of cows and heifers in milk or in calf in 1923 was approximately 280,000, or 2·1 cows per holding.

The majority of the farmers, it will be realised, are in a very small way. In the Counties of Fermanagh, Tyrone and Armagh, and particularly the two former Counties, store rearing and not milk is the main feature of their agriculture. Milk is, as it were, a necessary consequence of the breeding of store cattle. Little or no attempt is

made to increase milk yields by artificial feeding. The vast majority of the cows calve in the months of March, April and May, ready for the spring and summer grass. With the coming of the autumn, there is a steady and rapid fall in the milk supply. During the winter months the cows must subsist mainly on hay and relatively few turnips. Where artificial foods are used, they are mainly bruised oats and maize meal, a mixture quite unsuitable for a dairy cow. It will be readily understood, therefore, that the coming of winter sees the disappearance of milk from all those districts where the supply of milk to the city of Belfast and the smaller towns of Northern Ireland is not a practical proposition. These facts are well borne out by the following table which shows the monthly intake of milk from a group of three creameries in 1924.

TABLE 2.

MONTHLY INTAKE OF MILK FROM A GROUP OF CREAMERIES-1924.

			Gallons.
January	 	 	15,131
February	 	 	15,593
March	 	 	18,836
April	 	 	29,392
May	 	 	52,719
June	 	 	78,301
July	 	 	80,992
August	 	 	68,342
September	 	 	49,972
October	 •••	 	35,928
November	 	 • • •	19,343
December	 	 	14,018

In a nutshell, the system generally practised is summer dairying with the minimum outlay on purchased feeding-stuffs and an almost complete dependence in the summer on grass, and in winter on hay and a relatively small turnip ration. As may be imagined, the summer production of milk is subject to considerable seasonal variations. Thus a wet spring, summer and autumn, such as was experienced in 1923 and 1924, involving as it does poorer feeding pasture, is immediately reflected in a considerable drop in the milk intake of the creameries.

#### Type of Stock.

All the various breeds of stock are not well represented in Northern Ireland. Amongst the pure breeds, Shorthorns of the dairy and beef types predominate. There are a few pure bred herds of Kerries, Friesians, Aberdeen-Angus, Ayrshires, and Jerseys. The vast bulk of the cattle are crossbred Shorthorns. The Shorthorn bull is usually the one favoured by the farmer, and nowadays a Shorthorn bull with a milking pedigree is the most popular.

#### PRODUCTION AND DISPOSAL OF MILK.

The number of cows and heifers in calf in Northern Ireland on the 1st June, 1923, was 280,000. Of these, probably 10 per cent. were suckling calves, cows gone dry, &c., leaving a total of 252,000 for milk production. The total production of cows' milk during 1923-24 was estimated at 107,100,000 gallons, or an average of 425 gallons per cow. The use to which this milk is put is shown in the following table.

#### TABLE 3.

Utilisation of the Milk produced in Northern	IRELAND. Gallons.
Human consumption of whole milk (population 1,280,000)	25,600,000
Utilised by creameries for production of creamery butter	18,816,000
Consumed by calves	8,820,000
" " pigs	1,350,000
Converted into cream, cheese, &c	3,000,000
Converted into butter on North of Ireland farms	47,000,000
Loss, spillage, &c. (less than $2\frac{1}{2}$ per cent. of total)	2,514,000
Total production of whole milk	107,100,000

It will be observed that about 18 per cent. of the total milk produced goes to the creameries in Northern Ireland for the production of creamery butter. As a rule farmers who send their milk to creameries deliver it to the creamery or its associated milk collecting depot, every day in the summer time and twice or three times a week in the autumn and winter; and take back with them an equivalent quantity of separated milk, which is mainly used for pig feeding. The prices paid from April to September vary between 61d. and 71d. per gallon, and for the period October to March from 8d. to 9d. per gallon. To these prices must be added the value of the separated milk, say 2d. per gallon. It cannot be claimed that the prices are satisfactory or likely to encourage a more intensive production of milk. The manufacture of butter is the most economical method the creameries have of disposing of the milk, and it is not easy to see how, under the present system of seasonal dairving, the creameries can pay more. Their overhead charges run throughout the year, whilst their manufacturing period does not extend much beyond what may be broadly termed the summer months.

The production of butter by Northern Ireland creameries amounts to 70,000 cwts. per annum, a large portion of which (see Table 5) is exported to England and Scotland. Competition from Denmark, and lately from New Zealand, has focussed attention on marketing. The Northern Ministry of Agriculture has made strenuous efforts to improve the quality of the butter manufactured in Ulster creameries. Periodical visits of inspection are paid by the Ministry's Inspectors, who advise Creamery Managers both on the technique of butter manufacture and

on the proper marketing of their produce. A series of Surprise Butter Inspections has been organised, and several of these inspections are held each summer at prominent centres in Great Britain. In order to make sure that the element of surprise is a reality, samples for these inspections are called for by telegram, or may be forwarded by an Inspector of the Ministry. The samples must be taken from the ordinary creamery butter made on the day on which the call is made, and must be forwarded on the same day. Every precaution is, therefore, taken to ensure that the "surprise" sample fairly represents the butter ordinarily produced at the particular creameries. Last year twelve such inspections were held; six in Belfast, two in Glasgow, and one each in Liverpool, Manchester, Newcastle-on-Tyne and Omagh. At the centres in Great Britain the judges for the inspection are selected from among prominent local butter merchants. The butter is graded in three classes, viz.:-Premium.

Standard,
Below Standard.

A Special Government Stamp has also been instituted, which only those creameries which have been successful in obtaining premium or standard at six successive Surprise Butter Inspections are entitled to use. A condition of the Stamp is that creameries must regularly forward samples of butter to each Inspection, and the Stamp is withdrawn if a creamery subsequently fails to obtain standard marks. The

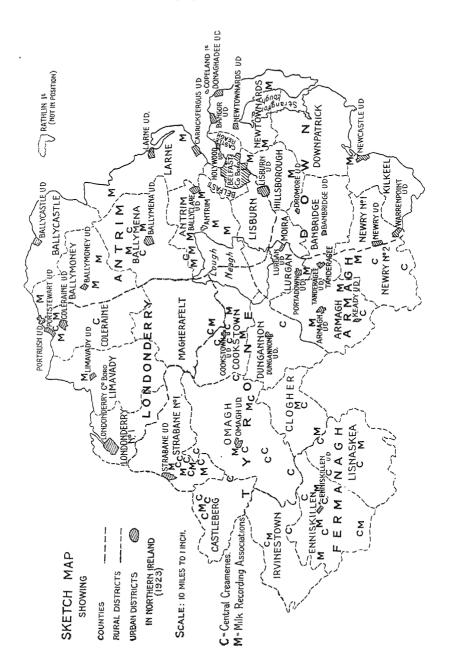


Ministry's Stamp (see illustration) thus affords a guarantee that the butter has been made by a high class Northern Ireland Creamery.

#### FARMERS' BUTTER.

As will be seen from the map, creameries are more a feature of Counties Fermanagh and Tyrone, and even in Tyrone their distribution is not such as to tap more than a portion of the milk supply of the County.

In South Antrim, North Down, and North Armagh, dairying follows the usual lines associated with milk production for a large city. In the majority of cases, the farmer is a true milk producer; that is to say, he is a breeder as well as a cow keeper. There are a few relatively



small areas in the immediate neighbourhood of Belfast where the farmer buys cows as "springers" and sells them off fat to the butcher at the end of the lactation period. The North of Ireland is, however, much freer from that type of dairying than is the case in the Home Counties of England.

Reference to Table 3 shows that 45 per cent. of the milk produced is turned into butter on the farms. Only in rare instances is a separator The practice followed is to churn the whole milk. It is rightly claimed that this method gives a butter-milk of higher feeding value than separated milk: but it is equally true that a greater amount of milk is required to produce one pound of butter. Thus, in the case of creamery manufactured butter, where modern machinery is in use, 2.4 gallons of milk are required for the production of one pound of butter, whereas in the case of the farmers churning whole milk, 2.85 gallons of milk are required. The butter-milk produced by the churning of the whole milk mainly goes to the feeding of calves and pigs. A certain proportion comes into the city of Belfast and other towns in small barrels or churns, where it obtains a ready sale to the bakers, city restaurant proprietors and private individuals. The sale of butter-milk to the urban population of Northern Ireland is a feature which is probably unique. Relatively large quantities of butter-milk are used daily by the city bakers in the baking of soda bread, scones, &c., whilst in the restaurants butter-milk is, so to speak, "on tap," and probably more butter-milk is drunk in the city restaurants than any other single beverage, with the exception, of course, of tea and The farm butter, which after all forms the greater part of the butter produced in Northern Ireland, is marketed locally, and it is doubtful if any appreciable quantity is exported. The following table gives statistics concerning the production of butter in Northern Ireland :-1923

						20.00
						cwts.
Production	of	butte	r by creameries (approx.)		•••	70,000
,,	,,	,,	on farms (approx.)	• • •		147,000
			Total production	•••		217,000

#### MILK RECORDING ASSOCIATIONS.

A great effort has been made by the Northern Ministry since its inception to stimulate the production of milk. Several schemes are in operation for this purpose, because success does not depend on any one factor but rather upon uniform and steady progress along several lines. Thus the Surprise Butter Inspections and Marketing Scheme, of which an account has already been given, are devised with the object of maintaining a high quality in the butter exported, and it has helped materially to improve the position of North of Ireland butter on the British market. The premium bull schemes, with extra premiums for suitable bulls with milking pedigrees, and the recent Livestock Breeding

Act which makes it an offence for any person to keep a bull which has not been licensed, are all beginning to bear fruit. Probably the greatest benefit will come from the Livestock Breeding Act, which is quickly eliminating the "Scrub Bull." Although under the various livestock schemes prominence is being given to milking qualities, every effort is being made to see that milk is not being obtained at the cost of a calf unsuitable for beef production purposes.

Whilst such schemes are capable of producing rapid improvement. they can only do so if they are accompanied by an educational effort which will convince the small farmer not only of the wisdom of the schemes, but the desirability of bending his own efforts towards the desired end. At present, the Cow Testing or Milk Recording Associations, with their competitions between members and their inter-Association competitions, may be looked upon as the main educational effort as far as the farmers, apart from their sons and daughters, are concerned. In broad outlines the Milk Recording Associations are on similar lines to those in England, but there are one or two points of difference which are worthy of notice. Grafted on to the Milk Recording Scheme is a Central Butter Fat Testing Scheme. All cows entered in Milk Recording Associations are under the butter fat scheme, and samples are taken morning and evening at intervals of not more than six weeks. All the butter fat determinations are made in the milk testing laboratory at the University. Every member of a Milk Recording Association receives a report from the milk testing laboratory setting out the morning and evening yields of milk on the day the samples were taken and the average percentage of butter fat in the milk of each of his cows. At the end of the milk recording year each member receives a statement which, in addition to giving the yield of each of his cows, sets out the weight of butter fat produced by each cow and the average percentage of fat in the milk or each cow. Some idea of the growth of this movement may be obtained fr' n Table 4.

TABLE 4.
Showing the Development of Milk Recording Associations in Northern Ireland.

Year.	No. of Associations.	No. of Cows.	Average yield of Milk per Cow for complete lactation.	Average per cent. Butter Fat.	No. of Samples Tested for Butter Fat.	
1921 1922 1923 1924 1925	6 13 17 34 42	1,244 3,109 4,338 7,103 8,113	gallons. 540·6 542·7 610·4 593·5 Not yet	 3·68 available	 61,594 84,232	

The figures given in Table 4 do not include pure bred cows, which come under a separate scheme. It is true, of course, that 8,113 cows represent only between four and five per cent. of the total number of cows, and it is obvious that there is still abundant scope for growth. It should, however, be noted that the 8,113 cows are owned by 1,523 farmers, an average of slightly over five cows per farmer. That figure alone gives some idea of the difficulties which must be encountered in organising Milk Recording Associations in Northern Ireland. But the fact that it has been possible to increase the number of Associations from six in existence, when the Ministry began operation on January 1st, 1922, to 42 in 1925, and to bring in over 1,500 small farmers, emphasises the success with which this work is being rewarded. It may truthfully be said that three of the important factors which contribute to a successful dairy industry, namely, Breeding, Recording and Marketing, are making considerable progress.

There is, however, a further factor, namely Feeding, and it may be asked what progress is being made in this direction. No system of Breeding and Recording will produce the heavy milking cow. Having bred the milking cow, she must be fed accordingly, and Recording or Testing is the means of determining the success of the breeding and feeding operations. So far, it has not been possible to graft on to the Milk Recording Associations a Rationing Scheme. The difficulties are great, but not insuperable. Small farmers cannot order supplies in bulk; prices for concentrated feeding stuffs are at least £1 per ton higher than in England, and butter, at the moment, is the main outlet for the milk. The ground is, however, being prepared by lectures on the feeding of dairy cows to members of Milk Recording Associations, and a Rationing Scheme will be the next step forward.

#### THE FUTURE OF THE DAIRY INDUSTRY.

In T 14e 5 is set out particulars of the Import and Export of butter from Northern Ireland for the year 1923.

#### TABLE 5.

T7..... T

	NORTHERN	IRELAND	EXPORTS	AND	1 MPORTS	$\mathbf{OF}$	Bul	TER.
EXPORTS.				IMPORTS.				
			cwts.					cwts.
	$_{ m m}$ Northern			Through Northern				
1	orts	•••	. 70,000	lr	eland port	s ^	•••	55,000
					n Irish Fr			#A 000
				(n	et) .	••	***	70,000
	Total Expor	rts	. 70,000		Total Imp	orts		125,000
Balance being excess of Im-								
	orts over Exp							

Northern Ireland cannot, in the true sense of the word, be called a dairy produce exporting country. True, there is exported in the summer months 70,000 cwts, of butter: but, on the other hand, there is imported during the same season a corresponding quantity, namely 70.000 cwts, from the Free State and a further 55.000 cwts.. mainly from Denmark, during the winter months. These curious facts require some explanation. The position, briefly, is that Northern Ireland during the summer dairying season manufactures just sufficient butter to meet its own requirements. As, however, a large proportion of the creamery butter is exported to Great Britain under the premium butter scheme, the shortage is made up by an almost corresponding importation of creamery butter from the Free State. This is made possible by the higher price paid in Great Britain for North of Ireland creamery butter, compared with Free State creamery butter. During the winter months, production falls far short of requirements and as a consequence no less than 55,000 cwts. are imported from Denmark, &c.

It cannot be claimed from these figures that the dairying industry is in a satisfactory state. Its seasonal nature has serious disadvantages. Butter importers in England and Scotland require regular supplies all the year round. They naturally tend to favour exporting countries capable of sending supplies of uniform quality regularly, and are consequently reluctant to change to Irish butter in the summer, even if the butter is as good as the competing Danish and New Zealand supplies. It is probably this state of affairs as much as anything else, which tends to keep down the price of Irish creamery butter, and, consequently, the price the North of Ireland creameries can afford to pay for summer milk. It has already been mentioned that the overhead expenses of the creameries are running throughout the year, whereas production is seasonal, and it may be asked—What is the solution of the problem? Two methods are possible:—

- (1) Winter dairying, which in certain districts shows marked signs of development.
  - (2) A big increase in the production of summer milk.

If dairying is to survive in Northern Ireland, one or other, or a combination of both these methods must be adopted, but it is as yet by no means certain which of the two methods will be followed. Probably, the second method offers the greatest prospects at the moment. The difficulties in the way of an immediate advance along the lines of winter milk production have already been indicated. Briefly they are as follows:—

- (1) Few of our farmers in creamery districts have practical experience of winter milk production, and it will take time for the necessary educational effort to be effective.
- (2) The purchase of cakes and meals necessary for winter milk production, and at prices appreciably in excess of

those ruling in England and Scotland, appears to our small farmers to involve a greater outlay of money than they can afford

On the other hand, if summer dairving is to solve the problem, it involves increasing production to such an extent that a surplus for cold storage will be available for unloading in the British market during the winter months. Such an increase in production, although it would not keep the creameries in full working order during the winter months, would, by increasing the output, reduce the proportion that the overhead charges bear to the total cost. The elimination of cows with a low milk yield, together with an increase in the cow population are advances which could be rapidly developed, particularly if a systematic attempt was made to improve the grass land. Development of the heavy milking cow would necessitate artificial feeding during the late summer and autumn months, and sooner or later winter dairving would follow. There are already signs of such a development. Groups of farmers are to be met with who, either because they are anxious to market their young stock in excellent condition (and in the case of heifers and bulls, with a milking pedigree behind them), or because they are convinced that they will lose less by feeding an 800 gallon cow than a 400 gallon cow, have begun to use balanced rations for their cows and thus extend their milking period well into the winter months. Many, indeed, are beginning to calve their cows in the autumn. At the moment, their prospect of disposing of the milk to the creameries at a price which will leave a profit is not very bright, and it is possible they may have to bear the sufferings of pioneers for some time.

The developments, of which a sketch has been attempted in this article, do give hopes of a rosier future for the Dairy Industry in Northern Ireland. What does seem to be most needed at the moment is an agreed line of development, followed by a sustained effort, by the farmers, the creameries, the Milk Recording Associations and the Ministry of Agriculture, to carry the policy into practical effect.

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# THE WEST OF ENGLAND CONFERENCE, 1925.

By ELDRED G. F. WALKER.

THE West of England was unanimously selected for the 1925 Conference, with Bristol as the Headquarters. Mr. S. R. Whitley was the Chairman, assisted by a strong local Committee, the possessors of unbounded enthusiasm, and such powers of endurance that they must be classed A1; whether this was due to the consumption of milk or to that subtle but delightful beverage, cider. Anyway, they just expected their visitors to be equally fortunate, as a preliminary glance at the programme revealed the fact that the average road journey for each day just exceeded 100 miles. In army phraseology, this "put the wind up" those that were unaware of the admirable means of transit that exist in the Bristol District. Headquarters were made at the Royal Hotel, College Green. There was a very active Local Committee, and it was arranged that a guide well acquainted with the route should be in each of the chars-a-banc provided by the Bristol Tramways Company. The party, with local additions, kept at an average of about 80. They assembled on the afternoon of Friday, May 15th, and in the evening were invited to a reception in the magnificent Municipal Art Gallery, by the Lord Mayor of Bristol, who was accompanied by the Lady Mayoress.

The Lord Mayor gave them a cordial welcome as representatives of one of the most fascinating occupations. He reminded them of the attractions of the city and district. Somerset being famous for its cider, Devon for butter and cream, Wilts for cheese and hams, and Gloucestershire for an aristocratic breed of pigs, the Gloucester Old Spots. (Laughter.) Bristol was famous for a special kind of "milk" -(laughter)—which for centuries had been distributed to all parts of the world. From what he knew of the hospitality of Bristol, no doubt they would not be allowed to return home without judging for themselves the palatable qualities of that particular "milk." (Laughter.) He hoped their visit would be enjoyable and profitable, and expressed the opinion that in farming and dairying there was wonderful scope for co-operation. There was no industry in which co-operation could be more easily effected than in farming, and he was certain as time went on more attention would be paid to it. By co-operation great results could arise, beneficial to the farmer and those he employed; and he hoped the spirit of co-operation would grow in the primary industry of the country as in other industries.

"Bristol Milk" is a name given to a famous local brown sherry that has been for a long number of years matured in wood before being bottled. Mr. S. R. Whitley, Chairman of the Conference Committee, acknowledged the kindness of the Lord Mayor in giving an official municipal reception. They had come to enjoy themselves, to instruct themselves, to help, and be helped. Upon milk depended the welfare of the young. We could not have a Grade "A" population on a Grade "C" milk supply—(hear, hear)—and those in cities were interested with dairy farmers in the improvement and increase of the milk supply. He was glad to know that Bristol was doing big things and aiming high on the question. There was big room for an increased production. He mentioned that he was an old Cliftonian—the best school of all—and when the victorious Generals came back from the War four were sitting in one carriage, two of whom were at school at Clifton College. (Applause.) Dairy farmers were closely linked to the cities, and the closer the better for all of them. (Applause)

# CLEAN MILK SUPPLY.

Dr. R. A. Askins, Deputy Medical Officer of Health for Bristol, read a paper on "The New Era in Milk Supplies." He said a revolution in the methods of production and distribution of milk was shortly dawning. The difficulty in producing clean milk was that, in addition to being the most wholesome article of diet, milk was, unfortunately, the most delicate one, and still more unfortunately it was the ideal medium upon which germs grew and flourished. Many of those germs caused disease, but others destroyed milk by souring, and probably the cost of the loss through the latter cause in England in a year was a considerable portion of £1,000,000. In outlining a few of the essentials of a clean milk supply, Dr. Askins said a cow should be healthy in order that the milk might be good and free from tuberculosis. The ideal procedure was to have the cows tested periodically by tuberculin, and to remove from the herd those that reacted. He strongly recommended the periodical examination of cows by a veterinary surgeon. By those means the danger of milk being tubercular would to a large extent be removed.

The best thing was to have a separate milking shed. If, however, that was not possible, an ordinary cowshed could be made fairly satisfactory with but little expense. It was essential that the floor should be of impervious material, such as concrete, and the walls cemented to a height of four or five feet. The standings should be raised above the ground level and not be too long. Behind the standings should be a good deep gutter. Good ventilation and light were absolutely essential. Three square feet per cow should be regarded as an absolute minimum, and the light arranged so as to fall on the hind-quarters of the cow. Ample ventilation should be supplied through the windows. Manure must be removed at least twice a day and stored at a distance, not just outside the cowshed. A separate milkroom was necessary for cooling; it need not be very large, but must be well-lighted and ventilated. The floors and, at any rate, the lower

part of the walls, should be of cement or other impervious material. An ample water supply was essential. In fact, it was desirable to keep the floor of the milk room always slightly wet.

# UTENSILS.

The modern milking-pail, which was partly covered and had an opening as small as possible, must be used. If milking was performed in the cowshed, soiled litter must be removed or brushed on one side before anything was done. The hair on the udder and in the immediate neighbourhood must be kept short by means of hand-clippers. The hind-quarters of the cow must be kept carefully cleaned, a currycomb and stiff brush being used for this purpose. The udders and surrounding portions must be washed immediately before milking. The hands of the milker must be washed in soap and water, and a clean overall put on before milking.

All this might sound expensive in time. In actual fact, after a little practice, three minutes at the outside per cow was all that was required. Immediately after milking, the milk must be strained and cooled to about 50 degrees Fahrenheit, the best cooler being one which had wide corrugations which allowed of adequate cleaning. The 17-gallon churn, owing to its length, was most difficult to clean and sterilise. Also, it is very heavy to handle. The 10-gallon churn was infinitely better, and more economical of space during transit. There should be no holes in the lid.

All the utensils used in the process must be sterilised, and sterilising must be done by steam, as scalding was not satisfactory. It could not be too often repeated that a milk-pail or churn that looked clean to the eye might be swarming with bacteria, and it was only by sterlisation that the utensil could be rendered germ-free. One of the commonest causes of the souring of milk was the use of utensils which had not been sterilised, even though they might look fairly clean. Objection might be raised that a sterilising apparatus was expensive. That was a mistaken idea. For a large farm it might, perhaps, be necessary to buy sterilising apparatus costing a good deal more, but very simple and efficient sterilisers could be made by fitting up over the farm copper a galvanised tank or even an ordinary sanitary dust-bin. A Primus stove could be used as a simple and economical source of heat.

Grade "A" milk could be introduced by following the precautions outlined above. The disastrous results of milk containing germs were, practically speaking, avoided, and the result would be an excellent milk of a very pure and wholesome standard. The keeping quality would be enormously increased, and the monetary loss through souring avoided. The extra cost was very small, and Grade "A" milk could be produced and retailed at an additional cost of a penny per quart. The ideal to be aimed at was a universal supply of tuberculin tested milk, and he had little doubt that it would ultimately become possible.

The demand for Grade "A" milk had recently increased, and was still increasing in Bristol, and he would like to express his strong sense of appreciation of the work done by certain milk producers in the neighbourhood and by certain retailers in Bristol, with a view to encouraging a clean milk supply. The legal powers of local authorities wanted to be considerably extended, and he hoped to see the long-deferred Milk and Dairies Bill, 1915, in force the following September.

In a final word of warning to the public, Dr. Askins said it was necessary for the public to realise that because milk was in a bottle may, or may not, mean anything. They knew of very dirty milk that had been sold at an extra cost without any precautions being taken which were essential for the production of clean milk. For that reason, the Government had designed certain standards of milk, namely, Certified milk, Grade "A" milk, and Pasteurised milk. If they obtained one of those they were buying an article that was produced under Government regulations, which were a guarantee of quality. It was easy to know them, because the words "Certified," "Grade A," or "Pasteurised" were marked on every bottle. If that was not the case, they might be buying anything.

Dr. Askins having been thanked for his paper, and the Lord Mayor for his hospitality, the party returned to their hotel preparatory to a most arduous day. In the morning, at breakfast, interest centred in the local newspaper, which had reproduced a group of the members when the Conference was held in Somerset 32 years previous. It so happened that Mr. Robert Long, a member of the present party, was also present at the previous Conference. Then it was fashionable for men to wear whiskers. Now, to be in the fashion, he was without

them.

# SATURDAY'S TOUR TO LORD BLEDISLOE'S.

There was little time to discuss Mr. Long's hirsute appendages, as there was an exceedingly long journey ahead of the party. They were soon seated quite comfortably in four Bristol chars-a-bane and speeding up through the County of Gloucester. There was a short stop at Gloucester to pick up more of the party, and the journey was continued on the other side of the Severn until the next halt was made at the Bledisloe Fruit Farms. Here Lord Bledisloe met the party, and personally showed them over his highly practical and well laid out cider house and cider-making plant. The fruit farm comprises some 53 acres, and fruit bottling is carried on here.

# THE FARMS.

The journey was then resumed to the Bledisloe farms. The original home farm, now known as Old Park, was farmed by Lord Bledisloe for many years before the War, and he kept there a fine herd of dark red beef Shorthorns, many of which were sold at good prices into the Argentine. Since the War he has started there (and subsequently at Holms Farm) a herd of pedigree dairy Red Polls, including several

cows giving upwards of 1,000 gallons a year. This farm has some fine old pasture land, mainly on the old Red Sandstone. All the other farms he has taken over since the War from various farm tenants, several of them in a very foul condition. These included Holms Farm. Dairy Farm, under a noted Swedish farm manager, Mr. A. Nilsson; Cross Farm and Vine Hall Farm, Avlburton: and Redhill Farm, which was previously a small holding of 60 acres in the hands of a retired timplate worker, and is now run as a pig farm in conjunction with an adjoining 64 acres of wood containing a large number of oaks. On the lastmentioned farm are now about 1,000 pigs, about 200 being pedigree Large Blacks and the remaining 800 first cross pigs raised for bacon requirements, and their mothers, which are mainly nedigree Large Blacks and Middle Whites, with a sprinkling of Gloucester Old Spots. The boars used for bacon production are pedigree Middle Whites and Large Whites of well-known prolific strains. Situate on the pig farm, above a well-equipped meal-house, is a very perfect little milling plant, provided by Messrs. Turner & Sons, of Ipswich, which is operated by electricity obtained from the West Gloucestershire Electric Power Station about a mile away, and which not merely grinds barley, beans, and peas for pig food, but also converts, with the help of a miniature dressing plant, Yeoman wheat grown on Bledisloe Farms into wholemeal flour, which is subsequently baked into delicious loaves in the small oven which is used for turning out pork pies at the bacon factory, and sold commercially in Lydney and Aylburton parishes.

Holms Farm has an area of 189 acres, including an arable field of 40 acres (the largest arable field in the district), upon which mixed crops, consisting of beans, oats, and vetches are largely grown for filling a modern concrete silo erected upon the farm three years ago. The cattle on this farm, which are mostly Red Polls, with a few Shorthorns, are fed largely upon silage for the purposes of their maintenance ration. Adjoining the buildings is one of the county experimental cider orchards, which was stocked about 18 years ago with selected

varieties of cider apples from Long Ashton.

Dairy Farm, near Lydney Church, which consists of 368 acres, and includes some of the finest grazing land in the county adjoining the estuary of the Severn, is managed with Little Allaston and Chelfridge Farms (each situate about two miles away) by Mr. A. Nilsson, who for several years was manager of Mr. Peter Ronholt's famous farm at Tibbygaard, near Haslev, in Zeeland, Denmark. This farm was taken over in a very foul state about 15 months ago, and has since been equipped with a first-rate modern cowshed which accommodates 70 non-pedigree dairy Shorthorn cattle, and which is equipped with every labour-saving appliance, as well as with every modern device for ensuring cleanliness of milking and purity of milk. The cow standings are arranged so that the cows stand head to head with a 3 ft. passage between them, where hay and whole roots, after conveyance by a mechanical carrier, are thrown for the cattle to help themselves. The standings are constructed of cork bitumen blocks, which

combine warmth with facility of cleaning. In the yard is a large covered midden for protecting the farmyard manure, with a capacious liquid manure tank underneath it.

About one and a half miles away on the other side of Lydney Park is Cross Farm, the farmhouse being in the centre of the village of Aylburton, which is Lord Bledisloe's estate village. At Cross Farm are the cheese dairy, bacon factory, and the poultry farm. The cheese dairy is at present receiving milk from Old Park, Holms Farm, Dairy Farm, and Vine Hall Farm to the extent of from 150 to 180 gallons a day, and converting it into Cheddar and Caerphilly cheese. Miss Clyde, one of the most successful of the students of the Somerset Dairy School at Cannington, Bridgwater, is now in charge there.

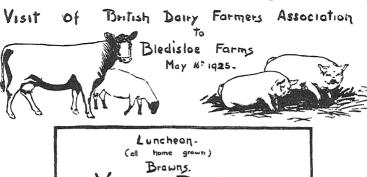
From the floor of the cheese dairy the whey is carried by gravitation in a sanitary pipe to a mealhouse, where it is mixed with barley and bean meal for the feeding of about 150 pigs which are going through the last stage of fattening for the adjoining bacon factory. Each pig receives about three-quarters of a gallon of whey. These pigs come down from Redhill Farm at four and a half months, and are killed in the bacon factory at six months old, at which age they are expected to have a dead weight of about 8 score. The bacon factory capable of dealing with about 80 pigs a week, most of which are converted into Wiltshire sides of bacon for the South Wales trade, but some are utilised for various pork products, including sausages, brawns, luncheon sausages, polonies, pork pies, sausage rolls, and similar commodities. Mr. J. Greenaway is in charge of the bacon curing, and Mr. A. E. Craig of the "smalls" department. The bacon factory is equipped with two refrigerating chambers with thick cork insulated walls, the refrigeration being effected by an ammonia compressor plant operated by an 8-h.p. oil engine, which is about to be replaced by an electric motor. Adjoining the bacon factory is the bakehouse, where the pork pies and bread are baked, the front part being also a shop for retail sales to residents in Aylburton. In the three orchards above Cross Farmhouse, a large poultry farm has lately been established, under the management of Mr. Charles Mason, the breeds chosen being White Wyandottes, Light Sussex, and Khaki Campbell ducks. From the bacon factory three vans carry bacon, various pork products, cheese, bread, eggs, and other produce every day to the villages in the surrounding area as well as to the town of Chepstow, where a good trade is done.

Finally, there is in the middle of the town of Lydney a smart and attractive shop known as "Bledisloe Shop," under the management of Mr. W. Baker, where the various products of Bledisloe Farms are retailed to numerous and increasing customers, who seem to prefer fresh, unadulterated British food raised in their own neighbourhood to similar products of foreign origin to which they were previously accustomed.

On arrival at Redhill Farm, Lord Bledisloe bade the party welcome. On his farms, he said, there were no fancy buildings or stock—they were run on commercial lines. There had been losses whereby they had gained experience, and they had done their best to obtain all the profit possible for the producer without fleecing the consumer. This could be done only by going to the consumer direct. The farms would not produce all the barley essential for feeding the large number of pigs, and they were building a 200-ton silo.

# A Home-Grown Lunch.

At Lord and Lady Bledisloe's invitation, many of the party, for the first time in their lives, partook of a home-produced lunch, washed down with home-grown cider. The menu cards had even been designed by the Hon. Miss Ursula Bathurst. It was a banquet such as a knight



Brawns.

Venison Pasties.

Luncheon Sausages.

Kerry Hill Mutton.

Pork.

Hams.

Chicken & Salad.

Yeoman Bread & Scones.

Jersey Butter.

Cheddar, Stilton & Caerphilly

Cheese.

Jam + Rhubarb Taris.

Bledisloe Cider.







of old would have delighted to put before his visitors. That home-grown and home-ground wheat. Yeoman No. 2, and home-baked bread, how soft, sweet, and pleasing to the palate, and then a cut of ham: was it not cured as it should be ? Mr. S. R. Whitley, in a brief speech, referred to the interest Lord Bledisloe had taken in his farms. He started from the bottom to make them yield their greatest production. There were but few landlords who were carrying out such a wise policy. The toast of "Lord and Lady Bledisloe" was given with musical honours. Lord Bledisloe, in reply, said his endeavours had been to produce two main lines—meat and milk products. These subsequently met at Cross Farm. The pigs were brought there for topping up by means of the whey from the make of cheese being mixed with the meal. and then the pigs were turned into bacon. The party next went over the various farms, well kept in every way. On his pig farms Lord Bledisloe is fast proving that second cross pigs are of small utility value compared with the first cross. After going round the farms we saw on one of them the following notice:—"Bledisloe Farms: Cowhouse notice: Milking must not commence later than 5.30 a.m. No smoking on these premises or during working hours.—Bledisloe."

The old adage, up in the morning, boys, is evidently believed in at Lydney. Before the party went to Lydney Park for tea they paid a visit to the British Roman Camp, the history of which was lucidly explained by Lord Bledisloe. The return journey was by way of the Forest of Dean, and Bristol was reached shortly after 9 p.m.

There was little rest for the Sunday. Surely, never has a more picturesque tour been arranged in any of the previous Conferences. After breakfast, the party went across that beautiful civic park, Durham, down to the Sea Walls, and admired the splendid view of the Avon The Suspension Bridge was crossed, thence to Belmont. The Vale of Ashton was beautiful in its greenery. The delights of Brockley Combe appealed to the visiting party immensely. Over Broadfield Down, thence by way of Butcombe to Blagdon Lake. A halt was made at the Rock of Ages in Burrington Combe. Road widening may be necessary for tourist traffic, but, alas, how it spoils this locality! Cheddar was reached shortly after mid-day. After an excellent lunch at the Cliff Hotel, Mr. W. Ozzard gave an address on the antiquities of the district. A start was then made across the moor to Glastonbury. As it was not possible to enter the Abbey ruins on Sunday a visit was made to Mr. Mapstone's Abbey Farm, where the Abbey Barn was viewed. Mr. Mapstone, who is one of the few farmers who have filled the office of Mayor, extended to his visitors the hospitality of his cider cellar. Then by courtesy of the Museum authorities the party were enabled to view the wonderful treasures contained therein. After tea at the Pilgrim Inn the tourists proceeded by way of Pennard to Shepton Mallet, thence back over Mendip to Bristol.

# Monday's Tour.

The party were early astir on the Monday morning; the Mendip air had endowed them with an appetite for Lord Bledisloe's sausages, which he had sent over for their delectation. The order now was to climb the Cotswolds.

The first few miles were somewhat uninteresting, through the heavy boot-making district of Kingswood. After leaving Warmley, the district opened up, and on passing through Wick it was recalled that it was from the rocks near here that the one-time famed Bristol stones were obtained. A short drive led us to Mr. H. Lear's Bottom Farm, Doynton. His herd of pedigree dairy Shorthorns was started about 25 years ago by purchases from the late Mr. G. F. King's and Mr. H. Butler's herds. The farm, which comprises 220 acres, is very open and exposed, being 400 feet above sea level. Young stock are run in the open during the winter. The milk from the herd is sold during the autumn and winter, whilst Double and Thin Gloucester cheese are made during the summer, Mrs. Lear being a successful prize-taker at the Dairy Show and elsewhere. Milk recording was started in 1918, coincident with the formation of the Bristol and Bath Milk Recording Society. In 1922-23, the cows and first-calf heifers averaged 7.126 lbs. of milk: in 1923-24, the herd, which included nine first-calved heifers, averaged 7,130 lbs. Nearly all of the cattle have been bred on the farm. Mr. Lear rears most of his young bulls. and disposes of them at the Bristol Shorthorn sales in February. following averages are interesting: 1920, £77; 1921, £82; 1922, £50 10s.; 1923, £57 15s.; 1924, £47 10s.; 1925, £50 4s.

A climb was then made over the escarpment of the Cotswold Hills; it was a bit stiff until Toll Down was reached. From here for several miles the farming is principally arable, and the soil brushy. Soon the big tree belts that screen Badminton were seen; they are especially beautiful this year in their Spring dress. After leaving Crosshands, the first large place was Didmarton, while a little farther on was that levely country seat, Weston Birt, where Queen Mary spent her holidays a year or two ago. Still a little farther on the thin taper spire of the Church at Tetbury is seen, and leaving Tetbury, a small roadside inn, bearing the unusual name of "The Trouble House," was passed; the name originated in the days of agricultural labourers' riots against the introduction of machinery on the farm. The soil is now very thin. On approaching Cirencester, the fine pile of buildings of the Royal College of Agriculture is seen; one of its most prominent students in the old days was Lord Bledisloe. In Circnester, the quaint old Abbey Church, with its flying buttresses, commanded attention.

Our first call in Cirencester was at Major Dugdale's—the Abbey. Before partaking of lunch the party had a few minutes to spend in the lovely gardens and grounds of the Abbey. Here were seen carefully preserved remains of Roman workmanship; and the rock garden was not missed. Truly it was a lovely spot.

After luncheon, Mr. Robert Long said that they could not part without proposing a hearty vote of thanks to Major and Mrs. Dugdale for inviting the party to their lovely home, and placing at their inspection the fine herds of Red Poll cattle and Large Black pigs. Major Dugdale replied, and referred to a letter he had received from New Zealand acknowledging the wonderful milking proclivities of the Red Polls in that country.

It was but a short way to Whiteway Farm. Here had been founded one of the finest herds of Red Polls outside of East Anglia, there being a considerable number of 1,000-gallon cows, and that wonderful bull. "Neston Gloucester." The Large Black herd of pigs was on view. That fine boar, "Cornwood Donard," for which Major Dugdale gave well over 300 guineas at the Cambridge Royal Show, was admired. Too much time could not be spent here as the Whiteway Poultry Farm was next to attract a deal of attention, as did its representative exhibit at Wemblev Exhibition During the last three years birds from this farm have obtained over 250 awards at leading utility shows throughout The 1923-24 successes included three gold, two silver. the kingdom. and one bronze medals, and many certificates in official laying competitions. All birds on the farm are trap-nested. The two mammoth incubators used have a capacity of 10.200 eggs, and the flock of spring chickens revealed how successful the hatch had been. The principal breeds kept are White Leghorns, Light Sussex. Black Leghorns, as well as Barnevelders, a breed that is fast establishing itself in the West of England. Khaki Campbell ducks are also kept in specially designed sheds. Over 8,000 birds were shown, and poultry experts from different parts of the kingdom admired their hard, healthy condition. Incidentally, the Suffolk representative, Mr. Clement Smith, indicated to the rest of us that the two Suffolk rams were of the right kind to breed winners in the show rings.

After leaving Major Dugdale's the route was through most typical Wiltshire country, and a stop was made to view Malmesbury Abbey. It was then a speedy run through the beautiful village of Grittleton to reach Mr. E. G. Harding's at Foxcote. Here, Mr. Harding had invited all his brother farmers round about, and his landlord. Sir Audley Neild, the finest squire in Wiltshire. Would that all landlords kept their tenants' farm buildings in such excellent fettle as does Sir Audley Mr. Harding's. But then as a tenant Mr. Harding puts in them cattle right worthy of the buildings. Then will not the name of Harding be long associated with the production of Cheddar cheese, the finest the world ever tasted? In fact, it was so good that the Scotsmen came down to learn how to make it. Now, Cheddar cheese cannot be made without good dairy cattle. After partaking of teaeven our Cotswold whetted appetities could not dispose of the last cake—we went to see the cattle. First, a grand bunch of Shorthorn vearlings on the lawn. They were an adornment to it. Then out to look at the herd of dairy cattle, over 50 grazing on luxuriant pasture and carrying veritable cheese tubs beneath them. A Northern dairy farmer was so spurred as to offer 50 guineas each for 50 right away. Mr. Harding received the offer with a smile, as well he might, for has not Mr. Harding produced his 2,000-gallon Shorthorn cow, and there are but few of them about. Yet how many farmers would jump for joy at receiving a fifty-fifty offer. We saw two-year-old heifers and heifers with their first calves, and all carrying that beautiful bloom. The party would have remained until night admiring this herd, but the guides in charge grew anxious. Before the party left, however, that shrewd Lincolnshire farmer, Mr. John Evens, perhaps the bestknown breeder of Lincoln Red Shorthorns in the world, had this to say, in moving a vote of thanks to Mr. and Mrs. Harding for their hospitality: "That Mr. Harding's was one of the best herds of dairy Shorthorns he had ever seen kept under rent-paying conditions. might talk of the deeds of monks and abbots of old, of ancient architecture, but he was more delighted to have seen that beautiful herd amidst such delightful surroundings." The party then speeded away, via that levely old-world spot. Castle Combe, but found its poetry washed out as they once more climbed up Marshfield way and then down over Tog Hill and back to Bristol.

# TUESDAY'S TOUR.

During Monday night there was a fine display of nature's fire-works, and a real West of England downpour accompanied it. Happily, Tuesday morning was much brighter. Once again over the Mendips into that most delightful portion of Somerset, Wells. The first call was at the St. Cuthbert's Paper Mills at Wells, a typical example of how trade can be conducted under the healthful conditions of country life. Inside the buildings can be seen the big stores of grass from which the paper is made, because it is not common wood pulp which goes in here. The material seen, the usual processes of boiling, washing, bleaching, and making on the paper machines follow one another much as in other paper mills. Absolute tidiness and cleanliness is the rule throughout.

On the return from St. Cuthbert's the party were shown over the Cathedral, the Bishop's Palace, and other items of the antiquarian

life of Wells, by Canon Alcock.

The party were the guests of Mr. A. J. Clare at luncheon in the Guildhall. The Mendip air had lent zest to the appetites. Mr. Sidney Edwards, in proposing a vote of thanks to Mr. Clare, referred to the delights of visiting such a fine old city.

Mr. Clare, in reply, said that in his opinion the time had arrived when only English made Cheddar cheese should be sold as Cheddar,

and outside stuff should be prohibited.

A move was then made to Mr. A. F. Somerville's Dinder. The owner had returned from the Weston Show to receive his visitors, who were soon lost in admiration of the magnificent cedars, the splash of

the waterfall in front of the serrated ridge of Dulcote rocks. Mr. A. F. Somerville founded his herd of Jerseys in 1889 by purchases from Mrs. McIntosh's herd; since then he has been a very successful exhibitor, both with his Jerseys and with the produce made from them. We were shown, firstly, his stock bull, whose dam has won three gold medals in butter tests, and his small but select herd of cows. Mr. Somerville keeps correct records, and his average has been 18-33 lbs. of milk to produce one pound of butter, and 6-38 lbs. of milk to make

one pound of cheese.

The journey was then renewed by way of the pretty valley of Croscombe and Shepton Mallet to Doulting, and then they arrived at Mrs. Sword's. The entrance to Mrs. Sword's Westcombe House. Batcombe, was by way of an old lodge, the drive bounded by vew trees, with the rooks cawing overhead, and the trout flapping in the stream that flowed from beneath that old ivv-covered bridge. Firstly. we had to partake of tea beneath a wide-spreading oak on the neatly kept lawn. Now, Mrs. Sword is one of those indefatigable ladies who. by the closest attention to the multiplicity of their duties put mere man to shame. Amongst the one and other items she takes in hand are those of School Manager, Pensions Officer, and Lady Visitor to the Poor Law Institution. She serves on the Education Committee, is Churchwarden, attends to children's welfare, and is Secretary of the local branch of the Women's Unionist Institution, and vet with all this, she has founded and personally superintends the management of her herd of Red Polls, which will certainly make a name for itself in the West Country. One of her pet cows is "Chaw Hill Amber," which took third prize at the Bath and West Show.

After leaving Mrs. Sword's the next call was at Mr. John Day's. The drive through Evercreech and along the roads to Mr. John Day's at Huxham was much appreciated. Mr. Day had a herd of between 60 and 70 excellent dairy cows grazing amidst the golden buttercups of his rich pasture. Though some of his cattle were at the show, he led us from field to field until we had seen a hundred at least of most typical milking Shorthorns, which were producing his Grade "A" milk. A visit to the farmstead revealed how he had grappled with the problem of converting olden-time designed cowsheds to a further period of useful service, whilst introducing the most modern ideas as regards extensions. His refrigerating plant was installed so that the milk can travel in the best condition. It cost some £200 to instal. This farm was so attractive, that the party overstaved the time allotted to it, and this resulted

in a late return to Bristol.

### WEDNESDAY'S TOUR.

Some of the party had expressed a desire to see the country seat of Lord Strachie, and accordingly, the tour had to be altered somewhat, for did they not know how well Lord Strachie had championed their cause in the Legislative Assemblies of the Kingdom? The

morning was gloriously fine, with visibility good. Soon we speeded past the old turnpike house at Stanton Drew into Chew Magna, with its noble tower. A turn up beside Knowle Hill, and the superb trees that embower Sutton Court were the admiration of those from the North. The nine elms at Widcombe, and thence along by the Prince of Wales' property; the quaint clipped yews at West Harptree, and thence along under the northern slopes of the Mendips, clad in their sheen of green.

Soon Langford Court Farm was reached, and many a dairy farmer heaved his deepest sigh of regret that his yards at home were not so neat and well kept. Mr. Griffiths soon led us to that noble herd of Shorthorn cows which Sir G. A. Wills has placed in these rich pastures. One could not pick out individual animals, but had to take a comprehensive survey of the whole lot, and then the grand monarch of the herd was led forth. Now eight years old, it has fully justified its owner's expenditure of 4,200 guineas to detain it at six months old.

Mr. Whitley in a terse speech referred to the wonderful benefactions of the Wills' family to the city life of Bristol, but he was more than pleased to see such splendid examples of how Sir George was agriculturally inclined as well.

To the road again. I doubt whether the country around Sidcot and Winscombe was ever more beautiful. Across the moors, Bridgwater was reached and left behind, and in a little time we arrived at the Somerset County Council's Farm at Cannington. The party were at once received by the Chairman of the Agricultural Education Committee, Capt. T. H. Watson, who said the idea of the Committee was to provide real farming instruction by making the pupils work in learning it. They were no kid-glove farmers. They had started their herd of dairy cattle as any farmer could by purchases in the open market. These were duly milk-recorded. Their first year's average was 570 gallons, the second year 720, and the third 803 gallons. This could be done by any farmer at no extra expense. They were also breeding up a stud of Percherons. Their land was not suited to sheep; hence their flock was only a flying one.

The party were then taken in hand by Mr. Hay, the Principal, who said the farm consisted of 175 acres when they started it, carried 45 head of cattle, and 40 ewes, and they had to purchase £35 worth of hay. In three years their herd consisted of 65 head of cattle and 80 ewes, besides lambs, and several colts, and they had been enabled to sell mangels and wheat straw to the extent of £67. A walk out on the greatly improved pastures soon explained the reason why. Also, each cow that yields over 3 gallons receives 3 lbs. of cake per gallon.

The time devoted to viewing the experiments in the fields was all too short. A return was then made to the spotlessly clean dairy, the presiding genius of which is Miss Saker. She told how she paid the farmers who sent in their milk 1d. per gallon extra for clean milk. The

last pint of each churn of milk is taken and strained through cotton wool and the sediment gathered. This so impressed a Northampton-shire County Councillor that he secured some of these samples to take back to his county as an educational idea. Pasteurised milk is neither encouraged nor believed in down Cannington way. After an excellent luncheon the party were once more en route, this time to visit the Somerset County Show as guests of the Somerset County Agricultural Association

Here the time was all too short to see the agricultural exhibits at one of the best shows this Association has yet held, and the County Council exhibit was highly attractive; in fact, I believe negotiations were set on foot to try and secure this exhibit as an educational exhibit elsewhere. Soon the party had to hasten away, this time to go to Brown's Café, where they were entertained to tea by the members of the Bristol Master Dairymen's Association. Mr. Whitley proposed a vote of thanks, which was responded to by Mr. Perrett. A drive along the sea front and then back to Bristol to be in time for dinner. A pleasurable and educational day.

In the evening the Conference dinner with guests was held at the Royal Hotel. Mr. S. R. Whitley presided, and was supported by the Lord Mayor of Bristol (Mr. E. Brookouse Richards) and the Lady Mayoress.

In giving "The City and Trade of Bristol," the President said that he came to Bristol first 50 years ago, when he was a small boy. The Association with which they were connected that evening was an organisation of people whose duty was to supply cities with a good supply of the highest grade milk. No city could have the utmost health and prosperity without an adequate and good milk supply. There might be an assertion that that was not done always, but during recent years there had been a tremendous revolution in their industry, so that the supplies now delivered were quite different from what was common in past years. They wanted that to be the case everywhere, but it must be the result of all the help they could get from those interested in civic government. In the back streets, where sunshine was almost at a discount, the best milk supply was an essential, and did much to remedy the absence of sunshine. He was glad to know that Bristol traders were leading the way in supplying milk in bottles. He wished that that method would become general.

The Lord Mayor, in responding, said that there seemed to be a magnetism that induced visitors to speak in such appreciative terms of the city that was called "The Gateway of the West." Its position, the beauty of its surroundings, its enterprise in all directions, and its wonderful charities, made it a city of many and varied attractions. Their river was not always particularly beautiful, but it was a very practical and useful waterway from which ships had sailed to all parts of the world and made extraordinary voyages. Bristol had been a

pioneer in several ways, particularly in railways and electric trams. In several directions it had great manufactures. The employees at the chocolate and tobacco works alone equalled the population of many places that were regarded as large towns.

# GOOD DAIRY FARMING IN THE WEST.

- Mr. J. Evens, who proposed "The Agriculture of the District," remarked that he noticed many evidences of good agricultural conditions in the course of his journeys during the Conference. Farmers should concentrate upon the things that were best suited to their immediate districts. Around Bristol were some of the best dairy farm lands, and, so far as he had seen, those responsible were making excellent use of that advantage. They heard a great deal about agricultural policy, but they wanted at least half-a-dozen policies to meet all the varied conditions of agriculture in Great Britain. He had advocated the relief of agricultural land from the burdens of some rates in order that those concerned might follow their calling with confidence, that they would be able to work under a settled policy. They wanted cheaper production, and he believed that British pluck and enterprise would, in the long run, win through that and other difficulties.
- Mr. E. G. Harding, who responded, said that the farmers of the Bristol district realised they had a duty to perform, and were doing their best to carry it out. They aimed at putting their produce on the market in the condition that it ought to be in. Districts in the neighbourhood of Bristol were noted for the production of important branches of the industry, such as Shorthorn cattle and Gloucester Spots pigs. As to "agricultural policy," about which they heard so much, he thought that farmers must- and could--work out their own salvation. (Hear, hear.)
- Mr. G. T. Barham gave "Our Hosts," and on behalf of the Association expressed thanks to all who had entertained the members during the Conference. Referring to the differences between this year's Conference and the one held in Somersetshire 32 years ago, he said that the introduction of the motor-car, which was practically unknown 32 years ago, had enabled the members this year to travel by road a distance of 700 miles. They were especially indebted to Lord Bledisloe for his assistance to the Conference—(Applause) and to the Local Committee, including Mr. Eldred Walker, who was "a real bit of Old Somersetshire." (Laughter and applause.) After hearing him give the order "All aboard" they would remember his voice for years to come. (Laughter and applause.)
- Mr. A. J. Clare and Mr. Eldred Walker, whose names were coupled with the toast, returned thanks.

# THURSDAY'S TOUR.

Though there was a big day ahead there were no vacant seats on the chars-a-banc.

The programme indicated a run of 130 miles. It was barely half-past eight when the all-aboard signal was given at the Royal Hotel. The first stop was at Lynham, and thence we speeded through Swindon to Queenlams Farm, Highworth, where we saw a very fine herd of Shorthorns, all tuberculin tested. Mr. Chillingworth started his own herd in 1895. He has never exhibited largely, but has produced two 2,000-gallon cows. He believes in a bit of sport, for has not his well-known steeplechaser, "Prime Dutch," won fully a score of well-contested point-to-points? And the cups were to be seen on the lawn.

The next move was across the fertile valley of the Thames to Lechlade, and thence to that wonder home of the dairy Shorthorns, Messrs. Hobbs', at Kelmscott. As long as Shorthorns remain, the name of Hobbs will be associated with them. To enable them to breed, to select, and to sell, Messrs. Hobbs' holdings comprise some 3,000 acres, half arable, half pasture.

After a fine luncheon of home-cooked foods we went on to Messrs. Sayers', Groundswell Manor, Blunsdon, Swindon. It may be mentioned that the Groundswell herd of British Friesians was started in Scotland during 1913, and moved down into Wiltshire in 1916, and numbers at present about 70 head. Messrs. Sayers are great believers in the virtues of ensilage.

Major Buxton's home farm at Tockenham was also visited. This farm, which has been under the care of Mr. W. C. Fry for over 30 years, is a model of neatness and cleanliness, and allied to this is good breeding, effecting a most desirable combination. Grade "A" T.T. milk is produced, and the bacterial count has been brought down remarkably low, the admirable manner of sterilisation counting much.

After partaking of tea and rambling through the lovely gardens, the next halt was the Wiltshire Creameries, Chippenham.

This Company handles a lot of milk produced by farmers in the Chippenham district. It is very up-to-date in its equipment. After inspecting the creamery the company were most hospitably entertained by the Directors, with the result that it meant another late dinner in Bristol.

## FRIDAY'S TOUR.

The party had kept well together; in fact, there were hardly any absentees on the Friday morning. A short drive took the members to Mr. Mostyn Williams' Manor Farm, Horfield. Here was seen the only milking machine shown on the Conference, and also the necessary appliances for the bottling of clean milk. Another short run brought

the party to Winterbourne Court, the home of Mr. T. Mansfield's British Friesians. Amongst this entirely home-bred herd were some exceptionally heavy milkers.

# THE OLD SPOTS.

Next came Mr. John Douglas' Gloucester Old Spots pigs. There were few breeds of pigs that so suddenly asserted themselves in popular favour as the Gloucestershire Old Spots pigs. They made sensational figures, as much as 600 guineas being paid for a boar, whilst a litter of six pigs realised £1,120 by public auction. The Woodstock herd, owned by Mr. John Douglas, has, happily, been kept up to date, and here will be seen some of the most representative specimens of the breed

Mr. William Douglas and the Directors took us to view Douglas motors. We were shown the T.T. machines that, it is hoped, will bring the trophies back from the Isle of Man this year.

After luncheon we went to the National Fruit and Cider Institute, Long Ashton, about which I have recently written. Thence to Mr. W. R. Withers, of Lower Court Farm, Long Ashton, who is in the happy position of having grown tired with the mere monotony of winning prizes through the medium of his justly renowned herd of dairy cattle.

The visitors were loud in their praises of this superb herd of over 50 cows and another 50 young beasts, all roans with the exception of one red. Tea on the lawn at Lower Court Farm brought the Somersetshire Dairy Conference to a close. It was generally considered to have been one of the best during the past 30 years. In fact, to cover an area some 90 miles square seemed a sheer impossibility to some when the Conference started. Yet this was accomplished without a single breakdown in the arrangements or a solitary cut in the programme. The excellence of the Bristol Tramway Company's new chars-a-bane enabled it to be done. The fine work performed by the Secretary of the Association, Mr. B. Ravenscroft, must not be overlooked, and it was hard on him to have to cut the limit of the Conference in face of the numerous other invitations which would have enabled it to run fully for another week.

ELDRED G. F. WALKER.

# ROOTS AND QUALITY OF BACON.

By GERVAISE TURNBULL.

The quality of bacon and the curers' ideal standards are being much ventilated at present—indeed the position seems chronic. It seems to be admitted that feeding has more to do with this matter than either breed or conformation, for while some curers are strong on particular crosses and a thick streak or belly, others actually prefer a thin one, and differ as to their choice of breed, though equally re-

jecting a soft or otherwise badly fed carcase.

It seems likely that we may hear more of the causes of the appearance of this type of bacon now that more vegetable matter is fed to pigs, for, useful as this is, it is not an unmixed blessing. Indeed it is only in the correct mixing of such foods with meals that we must look for economical results. So much of the grazing pig's food has hitherto been grass or lucerne that we have yet something to learn about the best proportions in which to use roots like swedes, kohl-rabi (a very good pig food), parsnips, carrots and even, probably, potatoes. If we go by the Rothamsted experiments of some years ago we find that roots like these gave as good quality when used up to 10 per cent. with meal as did the latter alone.

But, now-a-days, many use more than this, and some less. up to 40 per cent. potatoes seems to give good results when combined. say, with fish meal, or milk, as their effect on the carcase is better than with other roots, and they have more vitamines than might be supposed. Parsnips, on the other hand, though a much more nourishing food. want more discretion in using as they spoil the flesh, if fed in excess, Wiltshire bacon men have informed me. Cooking may have something to do with quality, for in Ireland the soft, oily nature of some of the bacon has been attributed to the use of the raw maize which is used. even when potatoes are cooked, as they are by the small Irish farmers. for it was found that cooked maize when fed with dairy produce did not make the bacon oily. However, cooking is hardly to be recommended except, perhaps, at present prices, with small potatoes. During the War there was some extensive feeding of the roots mentioned above. particularly kohl-rabi, when it was found that a high proportion of varied vegetable matter could be profitably turned into pig-meat of good quality when it was well re-inforced with albumenoid food in the form of cakes and other vegetable protein, so where there is no ready sale for superfluous roots pig-feeding (balanced) may still prove a useful means for their disposal, and even without stimulants in the form of meat or fish meals, which have lately been strikingly shown to be unnecessary when decorticated earth nut and bone meal are used.

# THE UNDER-NOURISHED CHILD.

By Sir John Robertson, C.M.G., M.D., B.Sc.

For a great many years it has been known that some children are under-nourished. They look pale, they are thin and dwarfed, and more or less dull in intellect. They seem in most cases to be careworn, and to lack the joy of life that ought to be in the possession of every young child. Some of these children grow up to be normal individuals, because apparently some alteration in their circumstances happens which gets them out of their mal-nourished condition. Others grow up to be permanently injured, and become the inefficients of the world.

Children in such a condition frequently succumb to intercurrent disease. Those who manage to survive are likely to become a charge on the community throughout the whole of their lives, more or less. They become what we call the C3 population.

It frequently happens that a doctor, on examining an undernourished child, will report no evidence of disease. If he ascertained what had happened to this child, he would usually find that the condition commenced some time after an illness, such as measles or whooping cough. He would also find in a large number of cases that the child came from a house where the parents were ignorant of the needs of young children. In some cases the parents are well-to-do.

It is rare to find that such a condition arises only from continued starvation in the usual acceptation of the word. It is more frequent that unsuitability of food, unhygienic conditions in the home, dirt, and overcrowding produce the conditions mentioned.

What has to be done for such a child? In the first place it is seldom that the under-nourished child requires medicine of any kind. What is of much more importance is that a careful inquiry should be made into the question of the kind of food consumed and into the child's habits of life, and that proper remedies should be applied. The most obvious remedies are as follows:—

- 1. Secure for such a child 10 or 12 hours' sleep in a well-ventilated bedroom.
- 2. See that the child is not overworked, either before or after school hours, by having to be up early or to work late at household duties, or in minding the younger members of the household.

- 3. Such a child requires suitable and properly cooked food, with a sufficient time allowed for mastication of the food
- 4. Time spent in the open air and in the sunlight has a wonderful stimulating effect on the nutrition of such a child.
- 5. An under-nourished child needs to receive the other amenities of life, such as good clothing, bathing, exercise, &c.

The foundation of most of our common chronic diseases is laid in childhood, and is usually due to want of knowledge on the part of the parents as to how to look after the child. It is very seldom due to purposeful bad treatment, for nearly all parents are anxious to be in possession of information as to what is necessary for the proper rearing of their children. English people, however, do not like being constantly told how to do this or that or how to bring up their children, and it is necessary that the instruction, if it is to be given, should not only be given by somebody who really has the knowledge, but by somebody who is capable of gaining the confidence of the parents because of the possession of such knowledge.

A good deal of this work of advising parents is now being done by school medical officers, whose duty it is to medically examine all children attending elementary schools and to get the parents of the children to be present at the examination, so that any defects and their remedies may be pointed out.

Habits formed during the lifetime of the parents are difficult to alter, and these bad habits are passed on to the children, with a result that many of these younger lives are damaged by the unwholesome conditions obtaining in the household. It is often impossible to completely alter the habits of life of these people, and, therefore, something is necessary for the children which will to a limited extent counteract the evil effects of their household régime.

What has proved to be one of the best ways of assisting such children is the giving of some article of food calculated to supply the omissions in the home diet, and among these the best of all articles of food is milk. It is easy to supplement the child's normal food by giving a glass of milk twice a day, equal to one pint per day. It is possible now to purchase milk in half-pint bottles and to give a child during the morning session at school a half-pint bottle of milk, with a straw to drink it through, and a biscuit, and to do the same in the afternoon, without disturbing the school régime.

This method is recognised to be incomplete, but wherever it has been tried there has been definite evidence of increased growth and mental alertness and a loss of the under-nourished condition from which the child was suffering.

Most of the large American cities have demonstrated the value of giving this milk to the under-nourished child. In England we have gone to much greater trouble, and have supplied breakfasts or luncheons, usually with a portion of milk, to these under-nourished children, and the results have been good.

I suppose that everybody will admit that it would be more economical and that the results would be better if it were physically possible to alter the habits of the parents of these children, but this is a matter of extreme difficulty. It may be accomplished in a few cases, but in the majority it would be difficult or impossible to accomplish and the child would suffer.

An experiment was made in Birmingham by Dr. G. A. Auden, School Medical Officer, at the instigation of the National Milk Publicity Council, in 1922–23 on the results to be obtained by the giving of a pint of milk per day to under-nourished children, and comparative observations were made on children of the same age who appeared not to be under-nourished. Each child received its pint of milk on six days a week.

Dr. Auden reported that "the first and most noticeable result of the extra ration was a clear improvement in the bodily and mental vigour."

In addition to the improvement in the bodily and mental condition, there was an increase amounting to 20 per cent. in the red colouring matter of the blood among the poorly-nourished children, that is to say, their pallor became less. Such an increase could hardly fail to produce an increased metabolism, which is likely to show itself in greater vigour and a subjective feeling of improved well-being. In other words, the short Birmingham experiment demonstrated quite clearly that the giving of extra milk produced wonderfully good results.

It may be asked why it is that milk produces these effects. The answer is:—

- (a) Milk is one of the most nourishing foods we know of, because it contains nitrogenous matter easily assimilable in the form of dissolved albumen (white of egg).
- (b) It contains fat, also in the most assimilable form, viz., emulsion.
- (c) It contains the very important vitamines and salts necessary for growth and formation of tissue in children, and no other food contains all these qualities combined.

There are for practical purposes no children who are not greatly benefited by a liberal milk ration daily. It is wise, therefore, to advocate generally the free use of milk in the family budget, and to look upon it not as a liquid to quench the thirst, but as a food which nature has specially prepared and diluted for the young.

# IS MILK WASTED IN PIG-FEEDING?

By GERVAISE TURNBULL.

Whatever the rival merits of wet or dry feeding properly conducted we are apt to feed too much liquid in the ordinary way. And for this reason we are inclined at times to feed milk wastefully. The Danes have studied food values very closely, and their practice is different to ours. Their standard diets are considerably higher than our own, but they feed milk with more care than we do. They reckon milk to be about double the value of whey, and they feed it in that proportion, and not more than 12 to 30 per cent. of the total food value of the ration.

The effect of this is that they feed a dryer ration than we do. with probably a better return for their outlay. With breeding sows the matter is different, and it is far better to feed separated milk through the sow than to feed it in quantity to the piglings direct: but for feeding pigs we have very good reason to believe that the nearer in weight the proportion which milk bears, in reason, to dry food the better the feeding value. The same thing has been found with wheya proportion of one to two being somewhat better than one to three and higher—they have found in America. Each separately fed is of less value than when combined, and if we drown the meal we tend to lessen the value of combination. It has been found in America that if less than 3½ lbs. of meal accompany a gallon of separated milk the results are much less satisfactory than when the proportions are more even, and we are now finding out that the way the food is put together often has much to do with its nourishing power, for one food may have much influence on another.

If we take a ration for a Danish pig of 60-120 lbs. we shall find that the 6 lbs. of skim milk figures as one-sixth of the food value of the ration completed by 4½ lbs. barley meal and 2 lbs. potatoes, whereas our milk ration is apt to be more generous.

What was described before the Farmers' Club as a paying ration, popular for pigs from 80 lbs. to bacon size, consisted of 3 lbs. of potatoes and 4 of barley meal, plus 10 lbs. separated milk. We find here that we are giving rather less food solids than the Dane, taking the respective sizes of the pigs into account, but a much higher proportion of milk, and, quite likely, not getting so good a return for outlay. This proportion of milk is doubtless often exceeded, and the balance would be better given to the poultry. The success of dry feeding seems to point a moral this way.

# ANNUAL REPORT OF THE CONSULTING CHEMIST.

T. J. DRAKELEY, Ph.D., M.Sc., F.I.C., F.C.S.

The number of samples submitted by the members for examination during the past year has again been small, and only totalled 76. The articles have been mostly milk samples for routine analysis, and call for the following comment in this report.

During the past year there has been a noticeable increase in the number of samples of milk which have not reached the presumptive minimum limit of 8.5 per cent. of non-fatty solids. A large proportion of these samples were definitely known to be genuine, and to have suffered no adulteration whatever; and in the other cases, the high percentage of fat leads to the conclusion that water could not have been added. It would be interesting to know whether other analysts have also observed this peculiarity during the past year, and whether any conditions have existed to which this deficiency might be ascribed. If other analysts confirm the results, the matter certainly raises the question of the validity and accuracy of the regulations presuming that water has been added to the milk whenever the minimum presumptive limit of 8.5 per cent. of non-fatty solids is not reached.

# PRIVILEGES.

The Council of the Association has, with the publication of this issue of the Journal, extended the Chemical Privileges of all members.

Almost all the fees for analyses have been materially reduced, and in addition, each member whose subscription for the current year is paid, is now entitled to one analysis of a dairy product free of charge.

This is a real inducement for farmers to become members of the Association, and every present member will be advancing the objects of the Association by trying to bring in one member. Such a prospective member might consider joining the Association, not only to support the valuable work it is doing, but also to become entitled to the many privileges which the Council now offers with membership (see pages 255–260). Will each member send to the Secretary on a postcard the name and address of a non-member so that the Association may get into touch with the person?

# THE DAIRY SHOW OF 1925.

By SAMUEL R. WHITLEY.

Until well into the autumn, it looked as if the 1925 Dairy Show (October 20th, 21st, 22nd and 23rd), would be held without the usual unsettling conditions of coal or railway strikes, and with a minimum of danger from Foot and Mouth Disease, but such desirable circumstances were not to be, and, as the final arrangements were reached, the position with regard to Foot and Mouth Disease looked very threatening.

The demand for stand space was as keen as ever, and the entries in the competitive classes were not far short of record years, but at the last moment it was evident that many properly entered cattle would have to be kept at home, and out of a total entry of 470 cattle, only 247 were able to put in an appearance. Before they had settled down to the novel conditions of the Agricultural Hall, the Ministry's Veterinary Surgeons appeared on the scene, reporting a fresh outbreak in Sussex which necessitated the removal of some 20 cows which had come from the newly scheduled area—these were removed as quickly as possible and things settled down again, but only to be once more upset by the removal of four more just as the Show was opening—fortunately, these four had just time to compete in the Milking Trials and Butter Tests.

All sympathy must be extended to those who had gone to the great trouble and expense of sending their cattle, only to have them fired out, because some farmer's stock in their home-area had suffered from Foot and Mouth Disease, but such is the fortune of war and of competition, and the safety of the cattle remaining in the Hall has to be the first consideration.

Last year, during the Dairy Show, the country was in the throes of a General Election and the attendance at the Show suffered in consequence—this year there was an improvement in the attendance, though the gate-money was considerably short of the high-water mark attained just after the War.

The stand-holders reported having done good business, and were well satisfied—the Dairy Show is always a happy meeting ground for those engaged in like pursuits, and it becomes more and more a social function not to be missed by those who would keep themselves abreast of the times, but it must never be forgotten that its main purpose is to facilitate business in every direction.

The stands, as in the last few years, bristled with appliances specially designed to keep the milk pure, clean and wholesome, right from the cow's teat to the baby's mouth—it was evident that in a few years time all high-class milk will be sold in bottles, and the out-of-date methods of peddling out milk into the householder's more or less dirty jugs will soon be as dead as the Dodo.

Nature provided at the beginning of things that between the producer and the consumer, i.e., between the mother and the young-ster, milk should never be exposed to the atmosphere—life in cities and the long distance that milk has now to travel in order to reach the consumer, have caused this law to be broken and forgotten in the past, but science is bringing us all back to nature, with results that all up-to-date milk producers are now using their best endeavours to keep milk from the atmosphere, which means covered buckets, covered coolers, sealed churns and sealed bottles, &c. This means a great harvest for the makers and distributors of such apparatus, and the Dairy Show of 1925 reflected this fact to the full, but alas, the makers and distributors are sometimes apt to forget that they owe all this increased business to the teachings of Dairy Science!

Again, the Ministry of Agriculture assisted the National Institute for Research in Dairying and the British Dairy Farmers' Association to give demonstrations throughout the Show with a view to explaining and popularising methods essential for the production of clean and long-keeping milk.

These demonstrations drew large audiences, and were largely attended by medical men and others interested in Public Health. The time is fast coming when milk produced under such ideal conditions will be within the reach of every citizen who cares to ask for it—it is the average citizen and not the farmer that lags behind—the upto-date milk producer is already educated, but the average citizen still remains to be taught both the extreme value of milk and its extreme sensitiveness. Such demonstrations are, perhaps, most valuable in the cities, and certainly at the London Dairy Show they are very popular.

The Milk Publicity Council made a good display in the Hall, and were able to produce some good evidence that science and publicity are leading up to an increased consumption of milk. Slowly it is being realised that increased consumption of milk means lessened "Consumption" (or Tuberculosis) amongst children, and the quickest way to banish this dreaded disease from our homes is to "Drink More Milk."

The following table of competitive entries for the last 12 years shows a slight falling off from the high-water mark of 1923, though they are still as many as the Hall can comfortably accommodate.

The cows were again restricted to those that are "Recorded" in a properly recognised Milk-Recording Society.

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## CATTLE.

The entries for the three classes for Pedigree Dairy Shorthorns, with 26, 22 and 26 entries, were not quite so numerous as in some recent years, though competition throughout was good, but without any outstanding animals.

The results of the Milking Trials and Butter Tests are fully reported on in another part of this Journal, so special comment in this report will only be necessary where outstanding merit on Inspection is shown by the winners of those competitions.

Amongst Pedigree Dairy Shorthorns, perhaps the outstanding animal was Major S. P. Yates' "Rickerscote Foggathorpe," which won 1st both in the Milking Trials and the Butter Tests, with an H.C. for Inspection, though she had been 144 days in milk.

The two classes for Non-Pedigree Dairy Shorthorns, with 16 and 13 entries respectively, were disappointing as to numbers that were able to put in an appearance, there being only 3 present in the Heifer class.

Mr. A. B. Croxon's "Spot" was outstanding, securing 1st in the Milking Trials and 1st on Inspection, and eventually won the "Morrison" Trophy for gaining the greatest number of points at three consecutive Dairy Shows. In the Heifer class Mr. J. H. Robinson's "Watercrook Ruby" and Mr. W. H. Phipps' "Faith" were 1st and 2nd on Inspection and maintained the same honours in the Milking Trials.

The classes for Lincoln Red Shorthorns were well filled, and the competing animals a very even lot. Amongst the cows, Mr. John Evens' "Burton Amy 7th" was 3rd on Inspection, and 1st in the Milking Trials, and 2nd in the Butter Tests, while Mr. S. Reading's heifer "Langford Polly 18th" was 1st both on Inspection and in the Milking Trials.

British Friesians were again entered in goodly numbers, but Foot and Mouth Disease and other causes prevented many of the best animals from putting in an appearance. Amongst the Older Cows, Mr. S. Pyman's "Felhampton Susan" was placed 2nd on Inspection, 1st in the Milking Trials, and 3rd in the Butter Tests, thus winning the "Spencer" Cup for the most points on Inspection, Milking Trials and Butter Tests, while the Hache Herd's "Haydon Pax" seemed to have hard luck in receiving only Highly Commended on Inspection, but 2nd in the Milking Trials, and 1st in the Butter Tests.

Of the younger British Friesian Cows, Mr. C. W. Glossop's "Lund Blanche 22nd" distinguished herself by being placed 2nd on Inspection, 1st in the Milking Trials and Highly Commended in the Butter Tests.

The competition amongst British Friesian Heifers was of a somewhat limited character, but the 1st and 2nd prizewinners on Inspection maintained the same positions in the Milking Trials.

The classes for South Devon Cows were duplicated in order to allow a class for the new society called the Recorded Dairy South Devon Cattle Society—the old established class for full Pedigree Cows only brought 4 entries against 9 entries for the Recorded class, but the winner of the former class in the Milking Trials, Mr. G. Wills' "Snowdrop 2nd," was well ahead on points from anything that appeared in the new Recorded class, and this cow also had the distinction of being practically equal 1st on points amongst all competitors in the Butter Tests.

The class for Devon Cows (which used to be known as a beefbreed) did particularly well with 9 entries and 8 present, which the Judge considered as good representatives—the winners in the Milking Trials gained more points than those in the new Dairy South Devon Class, and the Judge recommends the raising of the qualifying minimum yields.

The Red Polls were slightly lower in numbers than at last year's Show, but a decided improvement in the class of animal, all the exhibits being of true Dairy type. This breed did particularly well in points for the Milking Trials considering their size, and in the class for Heifers the winners in the Milking Trials obtained more points than any other breed except Ayrshires—the winning heifer on Inspection, Mr. C. F. Newton's "Saham Darker Draught," being specially distinguished by gaining 1st in the Milking Trials and 2nd in the Butter Tests.

The class for Blue Albions brought 9 entries, which should be considered a fair number considering the hard luck this new breed has experienced through Foot and Mouth Disease at the two previous Dairy Shows.

They were of excellent quality and very well up in the points for Milking Trials, having the highest average of any class—Mr. J. D. Seal's "Pike Verocity" was 1st on Inspection, 1st in the Milking Trials and 3rd in the Butter Tests.

There were 5 entries in the class for Welsh Black Cows, which is a slight improvement on previous years, but the Judge still laments the small numbers.

Mr. C. W. Compton's cow "Hall Green Gift," a very neat animal of true Dairy type was 1st on Inspection, 1st in the Milking Trials, and 1st in the Butter Tests, winning the two latter competitions through giving particularly rich milk.

Ayrshires were again the outstanding breed of the Show—perhaps the finest collection ever seen at the London Dairy Show. Not only were the leaders in the classes outstanding in type and quality and general conformation, but also the yields in the Milking Trials very closely corresponded to the judgment on Inspection—Mr. J. Johnstone's wonderful cow "Millantae Mayflower" was 1st on Inspection and also in the Milking Trials with the excellent score of 165·2 points. In the Ayrshire Heifer Class 16 paraded, and were a repetition of the high standard of excellence attained in the Cow class, and the high average of milk yield made this class the outstanding class of Heifers.

The exhibition of Guernseys was spoilt by the unfortunate outbreak of Foot and Mouth Disease in Sussex just before the Show opened, but the Older Cow class was a fairly strong one, with Mr. T. R. Bolitho's "Tregye Maze" 1st on Inspection, 1st in the Milking Trials, and 1st in the Butter Test giving a really wonderful butter fat of well over 7 per cent. after being 191 days in milk. In the Younger Cow class all the cattle in the prize money were excellent specimens of the breed. Only four animals appeared in the Heifer class, but the 1st and 2nd were exceptionally good, Mr. Chester Beatty's "Calehill Peaceful" being 1st both on Inspection and in the Milking Trials.

The Jerseys made a fine show in spite of many absentees due to Foot and Mouth Disease. The 1st, 2nd, and 3rd prizewinners in the Older Cow class were all typical dairy cows, with wonderful udders, that had passed the 1,000 gallon standard, Mrs. H. Briggs' cow "Lily of the Valley" being outstanding as 1st for Inspection and also in the Milking Trials, while Mr. R. Bruce Ward's "Pirouette" was Highly Commended on Inspection, equal 2nd in the Milking Trials and 1st in the Butter Tests, making the highest score of all, showing well over 6 per cent. of butter fat after being 153 days in milk.

In the Younger Cow class, while all were good, Mr. G. Cross's "Roberta's Star 2nd" was outstanding with 1st on Inspection, 1st in the Milking Trials and 3rd in the Butter Tests.

The Two-year-old Jersey Heifer class also was most praiseworthy—the Judge, being of a practical turn of mind, while commending all the exhibits, expresses the hope that the heavily-rugged and delicate-looking Jersey will soon be a thing of the past—he wants them to improve the milk of other breeds.

The Kerry classes were, unfortunately, much attentiated by the fresh outbreak of Foot and Mouth Disease in Sussex, there being 13 absentees from the two classes, but both classes made a creditable show under the circumstances. One of the surprises of the Show was Lady Fitzgerald's cow "Buckland Peace 2nd" which was placed

1st on Inspection and 1st in the Milking Trials with the remarkable score of 134-2 points, thus beating all the Pedigree-Shorthorns at the pail.

There was a fair entry of Dexters, but here again the fresh outbreak of Foot and Mouth Disease caused several to be absent, and in the Heifer class only one was able to appear and carried off 1st prize, as it would probably have been in the same position if others had not been debarred from coming.

The class of Any Breed, to be milked three times daily, but again debarred from all the cu s and trophies, brought 8 entries, all of them British Friesian. For Inspection they were for the first time judged as a class to themselves. In the Milking Trials they put up wonderful scores, Mr. C. B. Tubb's "Terling Ivory 8th" making 176.8 points, the highest score in this Show, and probably the record of any Dairy Show—she gave  $9\frac{1}{2}$  gallons in the 24 hours. All the winners in the Milking Trials were below the standard of 3 per cent. butter fat at the early morning's milking, but to a large extent made up for that deficiency at the later milkings.

A scientific pamphlet from Belgium, where three times a day milking is the common thing, states that "it is usual for the morning's milk to be the poorest in butter fat and the *mid-day* milking to be the richest, while the evening's milking is about the average of the morning and mid-day samples."

Taking the butter fat figures of the first four animals in the above Thrice Milked class, in every case the morning's milk is the poorest (always below the 3 per cent. standard), but only in one case is the mid-day milk richer than that of the evening. The evening's milking gave very good butter fats, and the mid-day milking were quite fair, but the morning's (after a nine hours' interval) only averaged 2.53 per cent. of butter fat

#### Bulls.

The classes for Dairy Shorthorn Bulls brought rather more entries than usual, there being 6 in the old class and 19 in the young class. Both were good classes and led by Bulls of outstanding merit. They certainly deserve a better place in the Show, but it is difficult to find it, and the writer wonders whether it would not be a sound policy for the B.D.F.A. Council to abolish these Bull Classes and extend the prizes for Bulls given on the "Robert Mond" Challenge Shield lines, so that Bulls may be in the future more and more judged by the Milk Records of their progeny.

The class for Friesian Bulls brought only 2 entries and both were considered worthy of prize money. The class for Red Poll Bulls brought only 3 entries and all three were in the prize money.

The class for Jersey Bulls brought 7 entries with 5 present, and the Judge reported them all as excellent.

#### GOATS

The entries of Goats were only 48, the lowest number of recent vears, and two classes, viz., She-Goats, British Toggenburg, and the Recorded Class had to be cancelled for lack of support. A slightly higher proportion of those entered was able to be present, and only one was known to be absent through being in a scheduled area. Goats are the "poor-man's" cow, though appearances in the Hall might seem to belie this statement, and the writer does not like to see this diminution in numbers at the Dairy Show. What can be done to improve matters?

They were again stalled at the top of the Main Hall, and the quality of the animals was excellent, very few inferior specimens being present.

The outstanding feature was Mrs. Abbey's "Didgemere Dream" Q\*\*, a first kidder. This goat created a record for the Dairy Show by yielding 13.35 lbs. of milk with butter fat at 4.8 per cent. and 3.60 per cent. She headed her classes for Inspection and for Milk Trials and took away no less than 6 Challenge Trophies, besides helping to win other "Group" prizes—a truly marvellous record, but where one can lead, it ought to be possible for others to follow.

#### CHEESE.

The total entries of 459 were about up to the average of postwar Dairy Shows and, from the general comments of the various Judges, they may be considered a creditable display.

Stiltons.—Both the class for 6 Cheeses and the one for 18 Cheeses were about up to the average in numbers and quality, most of them being nicely moulded—it was noteworthy how the prizewinners seem to emanate from the Melton Mowbray district.

Cheddar Truckles and Cheddars.—These were three big classes of generally very fine Cheese. The Judges were struck by "a certain looseness" in the West of England Cheese and a "pronounced tightness" in the Scotch entries. Generally they thought the bulk of the Cheese were too young, and they consider the tendency towards too early maturity (and decay) is not in the best interests of British Cheese Makers.

The West of England carried off the 1st prizes in each section, along with the "Lord Mayor's" Cup and "N.K.J." Cup (Mr. S. T. White, of Ilchester), but the Scotch makers were well in the running for the other prizes.

More than half the entries for Colonial Cheddar Cheese came from Ontario, and carried off all the honours, including the "Hansen" Trophy. Other Colonies represented were South Africa, 3; Queensland, 2; New South Wales and East Africa, 1 each.

The entries in the *Cheshire Cheese* classes were more numerous than those of last year, and showed good judgment in the selection of suitable Cheese for the London Market. The best lots were very near in value, making final awards difficult. The "Lord Mayor's" Cup, along with the "Fulwood & Bland" Cup, were won by Mr. O. Hesketh's exhibit in the 12 Cheeses class.

The Judge reports the new "Novice" Class as containing some useful samples, but a good many of the Exhibitors have still a lot to learn.

The class for *Factory Cheese* brought 14 entries, very variable in quality, and many of the exhibits were tainted, and the texture was not typical in many of the varieties. The 1st prize went to a very good even lot of Derbys, and the 2nd prize to an exhibit of Cheddars, which, though clean in flavour, were rather too new.

Leicester Cheese.—A class of 10 entries, fairly representative of the type of Cheese, but the Judge found discoloration in several of the entries. The flavour on the whole was good, but the lack of similarity of flavour in the various Cheeses from the one Exhibitor detracted from their value.

The class for Lancashire Cheese had only 4 entries, but they were good Cheese of characteristic flavour and texture.

The class for *Derby Cheese* had 6 entries, but they were of good quality and distinctive type, with the texture uniform and well turned out by each Exhibitor.

The competition in the class for *Double Gloucester Cheese* was fairly keen, with 12 entries; the winning Cheeses were outstanding.

The class for Single Gloucester Cheese brought 9 entries which were good on the whole, and some excellent.

The class for *Caerphilly Cheese* brought 20 entries, only 1 of which was absent—a very good class, the winners being very close and typical of the variety—the worst specimens were too firm and dry, appearing to be made from milk of poor quality.

Wensleydales were a class of 6 entries, but with 3 absent—two of those present were not uniform throughout the 6 cheese required.

Both the Judges pass very favourable comment on the two classes for *Smallholder Pressed Cheese*, the classes being large and the produce generally excellent with very close competition.

For the first time these classes were divided according to size rather than according to whether they were quick-ripening or long-keeping cheese. One of the Judges strongly recommends a reversion to the old method of dividing the classes, viz., into quick-ripening and slow-ripening cheeses.

The class for *Small Cheddars*, open to pupils who have attended County Travelling Cheese Schools during 1924 and 1925, was quite good and had 13 entries, but the Judges considered many were too young and far from ripe.

The class for *Small Cheshires* brought 10 entries and was reported as too varied in substance and quality, &c., although the 1st and 2nd prize lots stood out.

The Inter-County Competition for the best collection of Small-holder Cheese, made by the persons who have received instruction in Cheesemaking at a County Council Travelling Cheese School during 1922-1925, brought only 2 entries; both were of good quality. The County of Berkshire being the winner.

The class for *Cream Cheese* (made from pure cream only) was a very good one, with 20 entries.

The class for *Unripened Soft Cheese* (other than Cream Cheese) was also very good, with the exception of one or two exhibits.

The class for a Collection of Produce (open only to Women's Institutes) to consist of 2 lbs. of Fresh Butter, 1 lb. of Cream (raw or scalded) and 2 dozen Eggs; the collection to be packed in a box and sent to the Show by Parcel Post, brought a very good entry of 18. The produce on the whole was good, but faulty packing was the cause of a number of broken eggs. The cardboard boxes, lightly packed, gave the best results, especially where good strong egg-boxes were used, or the eggs separately wrapped in tissue paper. The cardboard cartons were most satisfactory for cream.

#### BACON AND HAMS.

The classes for Bacon were very badly patronised, two of them containing only 2 entries each, of which I was absent, while the rest had 7, 6 and 5 entries only.

The Council should seriously consider how these classes can be improved.

The class for the Pig Breed Societies contained 4 entries, much as in previous years, and was won by the Gloucester Old Spots, which showed great improvements on their exhibits of past years.

The Individual Classes for Pure Bred and 1st Cross Pigs were not so well patronised as in previous years. In the Pure Bred Class the Gloucester Old Spots were again successful, and Lord Bledisloe had the satisfaction of winning his own Trophy for 1st Crosses, the cross being Large White and Large Black. A full report of these Bacon Pig Classes will be found in another part of this Journal.

The classes for Hams were slightly better filled than those for Bacon, but still nothing to be proud of. The class for One Ham

(open only to members of Women's Institutes), brought 3 entries, and the one for a Farmhouse-cured Ham had the same number. The Selling Class for Two Hams was better patronised with 13 entries.

### BUTTER.

The 2-lb. classes, both Slightly Salted and Unsalted, were well patronised, and the Judges report them as very good, especially the Novice class, there being a distinct improvement in the flavour all round, though in the class for Unsalted Butter (from Cattle other than the Channel Island Breeds) there were several exhibits which were below Show standard, both in colour and flavour, the difference between these and the prizewinners being most marked.

The class for Butter made from Scalded Cream was a particularly good one.

The entries in the classes for Commercial Butter show a slight improvement, and the Judge reports the exhibits, with just a few exceptions, to be good throughout, a number of exhibits showing exceptional merit, the texture, colour and flavour being almost perfect. In a few samples there was too much loose moisture; in others defects in packing, the colour of the parchment being cloudy and a poor finish to the Butter.

The new class for 2 lbs. of Butter made up in the most attractive form in Bricks, Rolls or Pats for table use brought 12 entries of a rather diverse character, and perhaps the exact requirements should be more clearly stated for future years.

The class for Fancy or Ornamental Butter had 5 entries, and the prizewinning exhibits were all exceptionally fine.

The classes for Colonial Butter were again very well filled, and the Judges report that the quality was very good, the prizewinners having a wonderful uniformity in the flavour, texture and colour, reflecting great credit on the makes. Canada, New South Wales, and Queensland samples were the most numerous, but closely followed by South Australia and Victoria.

The class for a Collection of Colonial Dairy Produce, to include Bacon, Dead Poultry and Eggs, brought two very interesting exhibits.

#### CREAM.

The class for Clotted Cream had a fine entry of 21, and at least half of them were splendid Cream.

The class for Cream (other than Clotted) also had a fine entry of 26, and the prizewinners were excellent.

## BOTTLED FRUITS.

Two of the classes for Bottled Fruits had to be cancelled for lack of entries, and the exhibits in the remaining classes were not good, showing poor grading and packing of the Fruit in the bottles. There were only 2 entries in the class for 6 Bottles of Vegetables, and the class for 3 Bottles was cancelled.

The Jams showed a decidedly higher standard than the Bottled Fruits. To the combined exhibit of Bottled Fruits, Vegetables, Jams, Fruit Jellies, Pickles and Chutneys, considerable praise is due, and the Silver Medal is recommended for the exhibits of the St. Weonards Women's Institute in this class

## HONEY.

The entries in the Honey Classes were only half those of last year and did not call for any special mention except that the class for Six Jars of Light Extracted Honey was the best that the Judge had seen at any Show. The prizes, generally, were won by Exhibitors from all over the country, no one district predominating.

The class for Colonial Honey brought only 3 entries, all made by the same Beekeepers' Association, viz., that of Ontario.

#### ROOTS.

Again the Root Classes made a specially good display. The class for Globe Mangolds was won by Mr. D. Thomas, from the Cardiff district, with Sutton's Seeds; the 2nd going to the same district, but with Webb's Seeds.

In the class for Golden Tankard Mangolds all four distinctions go to Sutton's Seeds, and two emanate from the Cardiff district. Again, in the Intermediate Mangold Class the Cardiff district is well to the fore.

Swedes in the South seem to have suffered from the June drought, and prizes mostly go Northwards, though the Cardiff district comes in occasionally. Scotland claimed all the honours in the Turnip Class. The collection of Cabbages was undoubtedly the feature of this section of the Show—the winning cabbages turning the scale at 85 lbs., 78 lbs. and 72 lbs. each, and were grown from home-saved seed. The class for Kohl-Rabi made an excellent display, 1st prize going to the Ampleforth College, near York, and grown from Carter's Seed. A very fine show of Marrow Stem Kale was made, and the prizes were well distributed over different districts.

Four entries were made in the class for a Collection of Roots for Cattle-Feeding in Winter, and 1st prize went to Mr. W. Watts, of Cowbridge, and the 2nd to Ampleforth College, near York, with very little to distinguish between the two.

# JUNKET MAKING CONTESTS.

Junket Making Competitions were as popular as ever, and the public showed their appreciation by being willing to buy unlimited quantities.

# BUTTER MAKING CONTESTS

The entries in the Butter Making Competitions in the centre Dairy were about up to average, and some very good work was done.

The Champion Contest brought 20 entries, and produced one of the best and closest competitions the Judge had ever seen, and it was extremely difficult to find the winner when all were so close up.

# MILKERS' CONTESTS.

For the first time in history, covered buckets were obligatory for these contests, but this seemed to make but little difference in the number of entries, and no insuperable difficulties were experienced by the competitors.

As already stated, Nature provided that Milk should never be exposed to the atmosphere, and this preference for Covered Buckets, Covered Coolers and Sealed Churns, which Science has taught us, are only so many practical steps towards returning (as far as possible) to Nature.

The competitions throughout were very carefully judged, and precautions were taken to make a rough estimate of the cleanliness of each sample of milk produced, thus bringing new features into these most useful contests.

## COW-JUDGING COMPETITIONS.

Eight entries were made for the Cow-Judging Contest, open to teams of Students from the Agricultural Colleges, Farm Institutes, and County Council Classes, and a very good competition resulted.

The Association's Challenge Cup was awarded to the Team from the East Anglian Institute of Agriculture, Chelmsford, for the second year in succession.

The Cow-Judging Contest, open to members of the Young Farmers' Clubs, brought 6 entries, and raised a considerable interest amongst the public.

The Silver Cup was won by the Sussex Baby Beef Club, and the Silver Medal of the British Dairy Farmers' Association for the Competitor gaining the highest points was awarded to Miss E. Harriott, (South Eastern Farmers' Calf Club). The two Bronze Medals of the Association for the competitors gaining the 2nd and 3rd highest points were won by John Harper and Edward Wise, respectively (both of the Sussex Baby Beef Club).

THE COW-JUDGING CONTEST, OPEN TO YOUNG FARMERS' CLUBS.

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Teams—Order of Placing.	Summary Pomts.	Highest Individual Competitors.	Points.
First—Sussex Baby Beef Club (winners of "Agricultural Gazette" Cup)	796	First—Edith, Hurriott (winner of Silver Medal, presented	284
Second—Heathfield Calf Club	738	by B.D.F.A.)	
Third—Northease Jersey Calf (lub	717	Second—John Harper(winner of Bronze Medal, presented by B.D.F.A.)	61 82 83
Fourth—Kingselere Calf Club	899	Thurd—Edward Wise (winner of Bronze Medal, presented by B.D.F.A.)	277
Fifth—Kirdford Calf Club	605		

## THE DAIRY SHOW MILKING TRIALS OF 1925.

By J. Mackintosh, O.B.E., N.D.A., N.D.D.

The Milking Trials during the 1925 Show were carried out on the same general lines as in previous years. The awards were made on the following scale of points:—

One point for every 10 days since calving, deducting the first 40 days, with a maximum of 12 points.

One point for every pound of milk, taking the average of two days' yield.

Twenty points for every pound of butter fat produced.

Four points for every pound of "solids-other-than-fat."

Deductions are made of 10 points each time the fat falls below 3 per cent., and 10 points each time the "solids-other-than-fat" falls below 8.5 per cent.

New rulings by the Council also came into operation for the first time with the 1925 Show. These rules are to the following effect:—

"Any cow or heifer whose milk for any one milking falls below 3 per cent. fat, and at the same milking also falls below 8.5 per cent. "solids-other-than-fat" shall not be eligible for any awards or trophies on Inspection, in the Milking Trials, or Butter Tests."

"The Milking Trial Judges shall have power to weigh the milk yielded by any cow or heifer at any milking from Sunday morning, October 18th, until Friday evening, October 23rd, and take samples for analysis therefrom."

Number of Entries.—The number of entries compared very favourably with those of the previous year, namely, 434 cows, as against 425 in 1924, and 18 entries in the classes for goats, as compared with 30 in 1924.

Number of Competitors.—The total number of competing animals present in the Show amounted to 226 cows and 16 goats. Details of the number of entries and the number actually present in each class is given in Table I, but it must be mentioned that the outbreak of Foot and Mouth Disease which occurred during the week-end previous to the opening of the Show, necessitated the removal of 26 animals which had actually arrived at the Hall. These animals were, therefore, not able to compete, and two classes, namely, 21 and 27, suffered more seriously than others, inasmuch as four animals in each of these classes had to leave the Hall under the restrictions imposed.

Number of Breeds represented —Thirteen distinct breeds were represented at the Show, and it is worthy of note that there were sufficient entries in each of the 31 classes provided for cattle to warrant the class being held. In other words, none of the classes provided by the Society had to be cancelled because of lack of entries. New classes were provided at the 1925 Show for Dairy South Devons entered in or eligible for the Herd Book of the Recorded Dairy South Devon Cattle Society, and for Jersey cows born after August 1st, 1920, and previous to August 1st, 1922. There was also only one class for Jersey heifers, whereas in previous years a class had been provided for Jersey heifers bred in England, and one for Jersey heifers bred in the Island of Jersey.

Highest Points Gained by a Cow.—The highest score of points made by a cow milked twice daily was 165·2 points, gained by an Ayrshire cow, No. 269. This high total was closely followed by a British Friesian cow, No. 139, with a total of 162·3 points. These high totals, however, do not approach the record of the Show for cows milked twice daily, which is still held by a British Friesian cow exhibited in 1921, which gained 173·8 points. It is worthy of note that in the classes at the recent Show for cows milked three times daily, one animal attained the high total of 176·8 points.

Highest Milk Yield.—The highest daily yield on the average of the two days for cows milked twice daily was 79·4 lbs., given by the Ayrshire cow, No. 269. This high yield, however, was exceeded in 1921 by a British Friesian cow which gave 82·3 lbs. A still higher yield was attained by one of the cows milked three times daily. In this class, cow No. 431 averaged 94·4 lbs. milk for the two days, the highest yield of milk ever given during any Dairy Show. This cow, however, lost 10 points because the percentage of fat in the milk on one morning fell below 3 per cent.

The highest yield of milk at one milking was 47.5 lbs., given by cow No. 158, but, unfortunately, the milk produced at this milking fell below the standard both in fat and "solids-other-than-fat." So far as mere quantity is concerned, this yield approaches very closely the record yield of 47.6 lbs., given by a non-pedigree Dairy Shorthorn in 1921.

Discussion continues around the question of milking cows three times daily at the Dairy Show, and on this point it is interesting to note that at the recent Show, 35 lbs. milk or more was produced at one milking on 39 occasions by 23 different animals. These 23 animals were drawn from eight different breeds, namely:—

Dairy Shorthorn Lincoln Red British Friesian South Devon Red Poll Blue Albion Ayrshire, and Kerry.

## NOTES ON CLASSES.

Class 1. Pedigree Dairy Shorthorn Cow over 5 years old.—Entries 26; present 12.—This class did not contain any outstanding animal in fact the average number of points gained was less than last year. Five cows failed to reach the standard of the class. The first prize of the class and the Desborough Cup were won by Major S. P. Yates' cow "Rickerscote Foggathorpe" (No. 3) with 132.9 points. The second prize and reserve for the Desborough Cup was awarded to "Pencoyd Blanche 2nd (No. 6)" with 127.2 points, owned by Mr. T. P. Preece. It is worthy of note that this cow tied for first place in Class 2 at the 1924 Show.

Class 2. Pedigree Dairy Shorthorn Cow over 3 and under 5 years.— Entries 22; present 10. The average number of points gained by this class showed a slight improvement on last year, but it is unsatisfactory to record that four animals out of the 10 present fell appreciably below the class standard of 83 points. The first prize was won by Mr. T. Tustian's "Greattew Darling" (No. 36) with a total of 123.4 points, and the second prize was obtained by Major R. F. Fuller's "Chalfield Valentine" (No. 30) with 113.2 points. The extra prize of £10 offered by the Shorthorn Society for the cow exhibited in Classes 1 or 2 gaining most points on Inspection and in the Milking Trials was divided between the above-mentioned two animals.

Class 3. Pedigree Dairy Shorthorn Heifer.—Entries 26; present 13. The number of animals present in this class showed a welcome increase on last year, and the average number of points gained also showed an appreciable rise. Five animals out of the 13 present, however, failed to reach the class standard of 66 points. The first prize was awarded to Mr. E. A. Smith's "Longhills Darlington 3rd" (No. 72) with 101.8 points, and the second prize was awarded to Mr. G. P. Golden's "Lady Doreen 9th" (No. 68) with 87.8 points.

G. P. Golden's "Lady Doreen 9th" (No. 68) with 87.8 points.

Class 4. Non-Pedigree Dairy Shorthorn Cow—Entries 16; present 6. This class showed a notable falling off from previous years in both number of entries and number of animals present. Nevertheless a high standard was attained, and only one animal failed to reach the class standard of 110 points. The first prize in the class, the Dairy Shorthorn Association extra prize of £10 and the Morrison Trophy were all gained by Mr. A. B. Croxon's cow "Spot" (No. 77) with 145.9 points. Last year this cow was also first in the class and was reserve for a number of cups. The second prize was awarded to Messrs. Kidner Bros.' "Stokely Cross Beauty" (No. 75) with 131.7 points.

Class 5. Non-Pedigree Dairy Shorthorn Heifer.—Entries 13; present 3. Again a poor entry has to be recorded in this class, and the number of animals present was only three. The first prize was awarded to Mr. J. H. Robinson's "Watercrook Ruby" (No. 96) with 94-6 points.

Class 6. Lincolnshire Red Shorthorn Cow.—Entries 14; present 11. This class showed a remarkable improvement on the corresponding class last year. The average number of points gained by nine animals last year was 93.8, whereas 11 animals in 1925 averaged 115.4. Three animals failed to reach the class standard of 100 points. The first prize was awarded to Messrs. J. Evens & Son's "Burton Amy 7th" (No. 104) with 149.9 points. The same exhibitor's cow "Burton Hempy 6th" (No. 107) gained the second prize with 145.8 points.

Class 7. Lincolnshire Red Shorthorn Heifer.—Entries 13; present 5. Although the number of animals present in this class was low they attained a high average standard, all animals exceeding the class standard of 66 points, the average being 84.6 points. The first prize was awarded to Mr. S. Reading's "Langford Polly 18th" (No. 122) with 108.0 points, and Messrs. J. Evens & Son gained the second prize

with "Burton Hempy 9th" (No. 126), 93.2 points.

Class 8. British Friesian Cow over 5 years old.—Entries 24; present 14. This class maintained the uniformly high standard which has been set by the British Friesian cows in recent years, the average number of points gained being 123.8. Four cows, however, suffered deductions through the percentage of fat in the milk falling below 3 per cent., and several also lost points through the percentage of solids-other-than-fat falling below 8.5 per cent. The first prize was awarded to Mr. S. Pyman's "Felhampton Susan" (No. 139) with 162.3 points. This cow also gained the Spencer Cup and was reserve for the Gold Medal, the Barham Cup, and the Shirley Cup. The second prize was awarded to "Haydon Pax" (No. 137), owned by the Hache Herd, with 155.1 points.

Class 9. British Friesian Cow over 3 and under 5 years.—Entries 20; present 7. The comparatively small number of cows present in this class also showed a high standard of merit, the average number of points gained being 119.8, and only one cow failed to reach the class standard of 91 points. The first prize was awarded to Mr. C. W. H. Glossop's "Lund (imported 1922) Blanche 22nd" (No. 159) with 137.0 points. Mr. B. Parkinson's "Thurston Karel's Emily" (No. 164) was second with 135.1 points, and Mr. W. Twentyman's "Winchester Musk" (No. 171) was a good third with 134.1 points. This cow unfortunately had 10 points deducted for the fat percentage falling below 3 per cent.

Class 10. British Friesian Heifer.—Entries 13; present 3. The number of animals present in this class was regrettably low. The first prize was awarded to Mr. J. Bromet's "Golf Dorrit 2nd" (No. 185) with 99.5 points, closely followed by Mr. E. Furness' "Hamels Eleanor" (No. 182) with 97.8 points.

Class 11. South Devon Cow eligible in or entered for the Herd Book of the South Devon Herd Book Society.—Entries 4; present 2. This class contained one outstanding animal, namely, "Snowdrop 2nd"

(No. 189), owned by Mr. G. Wills. This cow obtained 145.7 points, and also gained the Silver Cup presented by the South Devon Herd Book Society, and the South Devon Herd Book Society's extra prize of f5.

Class 12. Dairy South Devon Cow entered in or eligible for the Herd Book of the Recorded South Devon Cattle Society.—Entries 9; present 6. This class was held at the Dairy Show in 1925 for the first time, and made a most creditable appearance. The first prize was awarded to "Luson Milkmaid" (No. 194) with 119.5 points, owned by Mr. G. Furneaux, and Mr. R. Hall's "Ferry Lady" (No. 192) obtained the second place with 111.7 points.

Class 13. Devon Cow.—Entries 9; present 8. The number of entries in this class showed a welcome increase over recent years. The standard of excellence, however, was not very uniform, as three cows out of the eight present failed to attain the breed standard of 90 points. The first prize was gained by Mr. A. T. Loram's "May" (No. 206) with 135 points, and the same exhibitor's cow "Janet" (No. 205) was second with 127.7 points.

Class 14. Red Poll Cow born before August 1st, 1920.—Entries 9; present 6. The number of entries was smaller than that of recent years, but a distinctly higher standard of milk production was attained. The class as a whole averaged 125·4 points, and only one animal failed to reach the class standard of 100 points. The first prize was gained by the Duchess of Newcastle with "Hardwick Ashberry" (No. 208) with 146·4 points. Major J. A. Morrison's "Hutton Dahlia 2nd" (No. 212) was second with 135·9 points, closely followed by "Gressenhall Red Berry" (No. 216), the property of Mr. W. R. Glazebrook, jnr. The six cows exhibited in this class constituted the reserve breed team for the Bledisloe Trophy.

Class 15. Red Poll Cow born between August 1st, 1920, and August 1st, 1922.—Entries 6; present 4. This small class attained a satisfactory standard, only one animal failing to reach the class standard of 83 points. The first prize was awarded to "Saham Leczie" (No. 221), the property of Mr. C. F. Newton, with 116-5 points. This cow was also awarded one of the Red Poll Cattle Society's prizes of £5, for the points gained by Inspection and in the Milking Trials. Mrs. R. M. Foot's "White Hill Pansy" (No. 219) made a good second with 114-5 points.

Class 16. Red Poll Heifer.—Entries 15; present 5. The number of animals forward in this class was very disappointing, but it was, nevertheless, gratifying that the average points gained showed an appreciable increase on the last two years. Only one out of the five animals present failed to reach the class standard of 66 points. The first prize and the Red Poll Cattle Society's prize of £5 was awarded to Mr. C. F. Newton's "Saham Darker Draught" (No. 229) with 107.4 points, and the second prize by Major J. A. Morrison's "Basildon Plotter 2nd" (No. 225) with 106.6 points.

Class 17. Blue Albion Cow.—Entries 9; present 5. The cows present in this class were by far the best entry of the breed that has yet appeared at the Dairy Show. It is interesting to note that the average live weight of the Blue Albion cows at the Dairy Show has increased in each of the last three years. In 1923 the average live weight was 10 cwts. 73 lbs.; in 1924 11 cwt. 44 lbs.; and in 1925 12 cwt. 73 lbs. This class also gained the highest average number of points for any breed, with an average of 128-3 points, as compared with a class standard of 100 points. One cow only failed to reach the latter figure. The first prize was awarded to "Pike Verocity" (No. 241) with 145-2 points. This cow yielded an average of 69 lbs. of milk for the two days of the trials, and was exhibited by Mr. J. D. Seals. The same exhibitor's "Pike Venice" (No. 243) was awarded the second prize with 137-6 points.

Class 18. Welsh Black Cow.—Entries 5; present 2. The first prize in this class was awarded to Mr. C. W. Crompton with "Hall Green Gift" (No. 251) with 108·1 points.

Class 19. Ayrshire Cow.—Entries 28; present 16. The number of entries and the number of cattle present constituted a record for this class at the Dairy Show, and in addition to numbers a very high level of all-round excellence was attained, the 16 animals averaging 121·7 points, as compared with a class standard of 90 points. Only three animals failed to attain the latter figure, and each of these three lost from 10 to 20 points on the quality of the milk. The first prize cow in this class, "Millantae Mayflower" (No. 269), the property of Mr. J. Johnston, averaged 79·4 lbs. of milk and gained 165·2 points. In addition to first prize, this cow gained the B.D.F.A. Gold Medal, the Barham Cup, the Shirley Cup, and the Rowallan Cup, and was also reserve for the Spencer Cup. The second prize was awarded to Messrs. A. & A. Kirkpatrick for "Dalpeddar Flora" (No. 256) with 144·3 points.

Class 20. Ayrshire Heifer.—Entries 21; present 15. The uniformly high standard attained by the entries in this class in recent years was well maintained at the 1925 Show. The average number of points gained by the 15 animals present was 90.4 points, and every animal exceeded the class standard of 60 points. The first prize was awarded to Mr. J. Cochrane's "Byreholm Viper 2nd" (No. 287) with 115.5 points. During the trials this heifer averaged 51.9 lbs. milk daily. She was also reserve for the Rowallan Cup. The second prize was gained by an English exhibitor, Mr. H. J. Clark, with "Kilfillan Fillet" (No. 293) with 99.8 points.

Class 21. Guernsey Cow born before August 1st, 1920.—Entries 17; present 8. This class was unfortunate in that four animals which had arrived in the Hall could not be allowed to remain and compete in the Milking Trials, because of the restrictions following an outbreak of Foot and Mouth Disease. Of the eight remaining to compete no less than six failed to attain the class standard of 85 points.

The first prize was gained by Mr. T. R. Bolitho with "Tregye Maze" (No. 306) with 106.6 points. This cow was also awarded the Stagenhoe Cup. The second prize was gained by Mr. W. F. Trumper's "Dahlia Polly 2nd" (No. 314) with 91.6 points.

Class 22. Guernsey Cow born after August 1st, 1920, and before August 1st, 1922.—Entries 12; present 9. This class as in recent years followed very closely the standard attained by the senior cow class, although the animals were fully 1 cwt. per head lighter on the average. Two out of the nine present failed to attain the class standard of 71 points. The first prize was gained by Mrs. D. Corbett's "Hockley Ivy 2nd" (No. 322) with 98-2 points, and Mr. J. B. Body's "Morland Lady Richmond" (No. 321) was a good second with 97-4 points.

Class 23. Guernsey Heifer.—Entries 9; present 4. This class showed a considerable falling off from the standard of recent years, although the average number of points gained (58·8) was still somewhat above the class standard of 56 points. The first prize was gained by Mr. A. Chester Beatty's "('alehill Peaceful'" (No. 329) with 86·9

points.

Class 24. Jersey Cow born before Angust 1st, 1920.—Entries 17; present 12. The provision of another class (Class 25) for younger Jersey cows resulted in the average live weight of this class being practically 1 cwt. per head heavier than previous years; also the average number of points gained (95·3) showed an improvement. Nevertheless four animals failed to attain the class standard of 90 points. The first prize was gained by Mr. R. Bruce Ward's "Pirouette" (No. 344) with 120·1 points. This cow was also reserve for the National Butter Cup. The second prize was gained by Mrs. H. Briggs with "Lily of the Valley" (No. 352) with 111·9 points, closely followed by the Hon. A. A. P. Henderson's "Windlesham Windflower" (No. 337) with 110·1 points.

Class 25. Jersey Cow born between August 1st, 1920, and August 1st, 1922.—Entries 18; present 11. The excellent entry for the first year of this class shows that it apparently supplies a felt want. The average number of points gained was almost as high as that of the older cows, namely, 92.5, and well above the class standard of 75 points, which was exceeded by every animal competing. The first prize was gained by Mr. G. Cross with "Roberta's Star 2nd" (No. 357) with 111-9 points, and the second prize was gained by "Tidy Mabel" (No. 356), the property of Mr. J. Pierpont Morgan.

Class 26. Jersey Heifer.—Entries 20; present 10. The number of animals present in this class was considerably below the number exhibited in the two classes for Jersey heifers which the schedule provided in previous years, and apparently also the usual standard of excellence was not attained. Five animals out of the ten present failed to attain the breed standard of 60 points. The first prize was awarded to "Doreen" (No. 373), with 91-3 points, the property of

Mr. G. Cross, and Mr. R. Bruce Ward's "Pavlova" (No. 381), made a good second with 89.5 points.

Class 27. Kerry Cow.—Entries 15; present 7. The number of animals present in this class was on the lines of previous years, but four animals were removed from the Hall under the Foot and Mouth Disease restrictions. The standard of excellence of the 1925 Show exhibits was far ahead of anything which this breed has shown at the Dairy Show. In fact, it was only the exceptionally successful exhibit of Avrshires that prevented the Kerry class from being the main feature of the Show. Every animal present easily exceeded the class standard of 90 points, and the average was 105.6 points. The first prize was gained by Lady Fitzgerald with "Buckland Peace 2nd" (No. 394); this cow, weighing only 8 cwt. 38 lbs., produced 56.8 lbs. of milk daily during the trials and gained 134.2 points—a higher total than was gained by any Pedigree Shorthorn. She was also awarded the National Milk Cup and the Kerry Cattle Society's Cup. The second prize was gained by "Coquet Gipsy" (No. 396) with 123.6 points, the property of Brig.-Gen. Ll. Palmer, and she vielded no less than 65.1 lbs. milk daily during the trials, but unfortunately lost points on the quality of the morning's milk.

Class 28. Kerry Heifer.—Entries 8; present 3. This class also attained a uniform standard of merit, averaging 69 points compared with a class standard of 53 points. The first prizewinner was "Castlelough Missie" (No. 414) with 69·3 points, the property of Capt. N. Zambra and C. Williamson-Milne. Lady Fitzgerald's "Buckland Emma" (No. 408) made a very close second with 69·2 points.

Class 29. Dexter Cow.—Entries 7; present 3. The first prize in this class was awarded to Mr. Theo. A. Stephens for "Just Found of Hookstile" (No. 421) which gained 86.4 points, and produced 49.1 lbs. of milk during the trials, but unfortunately lost points on the quality of the morning's milk. This cow was also awarded the Nutt Cup. Mr. F. H. Emmott gained the second prize with "Bridesmaid" (No. 420), which obtained 80.7 points.

Class 30. Dexter Heifer.—Entries 4; present 1. The winner of this class was Capt. W. O. Gibbs, with "Barrow Biscuit 2nd" (No. 423).

Class 31. Cows of any Breed milked three times daily.—Entries 8; present 5. The exhibits in this class were more uneven than has been the case at former shows, the individual points gained ranging from 100 to 176.8, and the average number of points was 137.8, as compared with 137.0 and 142.7 at the 1924 and 1923 Shows respectively. The first prize was awarded to Mr. C. B. Tubbs for "Terling Ivory 8th" (No. 431) with 176.8 points. This cow produced the highest yield of milk ever given in the Milking Trials at the Dairy Show, namely, 94.4 lbs. on the average of two days. The second prize was gained by Messrs. W. G. White & Sons for "Larborne Octavia" (No. 428) with 151.4 points. The average yield of milk for the five

animals exhibited was 73.4 lbs., as compared with 73.0 lbs. in 1924 and 75.1 lbs. in 1923. It is worthy of note, also, that each cow in the class lost points on the percentage of fat in the morning's milk.

Class Standard Points .- In the report on the milking trials of the 1923 Show, under this heading, attention is drawn to the uniformly poor performance of the smaller breeds at the Shows immediately preceding and including 1923, and to the comparatively high standard points required by the Association in respect of the Guernsey, Jersey, Kerry and Dexter breeds.

At the 1925 Show there is evidence of a remarkable recovery or improvement in the Jersey, Kerry and Dexter classes, and reference has already been made to the severe handicap imposed on the Guernsev and Kerry breeds by the Foot and Mouth Disease restrictions.

All the animals competing in the milking trials in Classes 20 (Ayrshire heifers), 25 (Jersev young cows), 27 (Kerry cows), 28 (Kerry heifers), and 30 (Dexter heifers), gained the standard points for each

At the same time the results of any one Show are not a reliable guide as to whether a breed is improving or falling back. For example, the following columns show the classes at each of the last three Shows which, on the average of all animals present, did not attain the Association's standard points.

1923. Blue Albion Cows. Guernsey Cows (aged).

Jersey Cows. Kerry Cows. Dexter Cows. Dexter Heifers. 1924

1925 Guernsey Cows Dairy Shorthorn Heifers (Pedigree). (aged).

Dairy Shorthorn Cows (Non-pedigree). Dairy Shorthorn Heifers (Non-pedigree). Lincoln Red Cows. Lincoln Red Heifers. Red Poll Cows (aged). Guernsey Cows (aged).

Kerry Cows. Kerry Heifers.

The above statement also illustrates the high standard of allround merit reached at the 1925 Show, and this excellence is further emphasised by the fact that in 17 classes the average number of points gained was higher than at either of the last two Shows. In respect of milk yield, points gained in the milking trials and general symmetry and breed type, the 1925 Show surpassed all of the many successful shows held by the Association.

## CHALLENGE CUPS AND TROPHIES. Open to All Breeds.

The number of cups and trophies open for competition between individual animals and groups of the different Breeds increases year

by year. The keenness of the competition is likewise accentuated and the impatience of the competitors to learn the results makes it almost unwise for the Judges to show themselves in the Hall from the time the weighing of the milk is finished until the results are posted.

(1) The Gold Medal of the British Dairy Farmers' Association awarded to the owner of the animal gaining the highest points in the

Milking Trials.

The Gold Medal was won for Mr. James Johnston, Millantae, Lockerbie, by his Ayrshire cow "Millantae Mayflower" (No. 269) with 165·2 points. This cow averaged 46·9 lbs. milk in the morning with 3·31 per cent. of fat, and 32·5 lbs. in the evening with 3·86 per cent. of fat. Mr. S. Pyman's British Friesian cow, "Felhampton Susan" (No. 133) was reserve with 162·3 points.

(2) The Barham Challenge Cup, awarded to the owner of the cow gaining the greatest number of points in the Milking Trials was likewise

won by No. 269, with No. 139 as reserve.

(3) The Spencer Challenge Cup, awarded to the owner of the cow gaining the greatest number of points by Inspection, Milking Trials and Butter Tests was won by Mr. Pyman's "Felhampton Susan" (No. 139), which in this case turned the tables on her Ayrshire rival by reason of greater excellence in the Butter Test. No. 269 was reserve.

(4) The Shirley Challenge Cup, awarded to the owner of the cow giving the greatest weight of milk in the Milking Trials, such milk to contain not less than 3.0 per cent. fat and 8.5 per cent. non-fatty

solids, was also won by No. 269, with No. 139 as reserve.

(5) The National Milk Cup, awarded to the owner of the cow or heifer, entered in or eligible for the herd book of its breed, gaining the greatest number of points per 1,000 lb. live weight in the Milking Trials, was awarded to Lady Fitzgerald, Buckland, Faringdon, Berks, for her Kerry cow "Buckland Peace 2nd" (No. 394) with 143-7 points per 1,000 lbs., and the reserve was Major C. R. Dudgeon's Ayrshire cow, "Cargen Holm Proud Lady 8th" (No. 254) with 129-2 points per 1,000 lbs.

(6) The Bledisloe Challenge Trophy, awarded to the Breed Society adjudged to have the best exhibit of good all round dairy cows. The conditions of this competition may be changed from time to time by the Council of the Association, and at the 1925 Show the conditions of the previous year were adhered to. The cows to compete on behalf of each breed were the six in the senior class with the highest points in the Milking Trials, provided that such animals have been passed by the Inspection Judge as typical specimens of their respective breeds.

The total number of points gained by each team of six consists of the milking trial points of each animal, plus inspection points on the basis of 100 points for first prize, 90 points for second, 80 points for third, and 70 points for the fourth place. Eleven teams competed, compared with nine in 1924 and 1923. The points gained by each

team are set out in the following pages.

THE BLEDISLOE TROPHY TEAMS AND POINTS GAINED, DAIRY SHOW, 1925.

Class	Class 1—Pedigree Shorthorns.	ee Shortho	rns,	Class 4	Class 4—Non-Pedigree Shorthorns,	igree Shor	thorns.	Class 6	Class 6 Lincoln Red Shorthorns.	Red Short	horns.
No. in Catalogue.	Milk Trial Points.	Insp. Points.	Total Points.	No. in Catalogue.	Milk Trial Points.	Insp Points.	Total Points.	No. in Catalogue.	Milk Trial Points.	Insp. Points.	Total Points.
69	132.9 127.2	70	132.9	77 75	145.9	100	245.9	104	149.9	08	229.9
26 10	124·6 122·7	18	124·6 202·7	& 6 	129.3	2	129.3	111	136.4		136.4
15	115.0	100	115.0 212.3	84	115.9	86	205 · 9 83 · 1	113 115	121.4	1 1	121.4
	734.7	250	7.486		730.0	940	1070.0		797 · 1	80	877.1
											Ave Sicures Selection and Ave
Cla	Class 8—British Friesians	sh Friesian	83	Class	Class 12—Dairy South Devons.	South De	evons.		Class 13-	Class 13—Devons.	The same and
139 137 134	162·3 155·1 151·9	06	252·3 155·1 151·0	194	119.5	858	199.5	206 205	135.0		135.0

	135·0 127·7 113·2 171·0 188·8 87·2	822.9
-Devons.	1   120	160
Class 13—Devons.	135.0 127.7 113.2 101.0 98.8 87.2	662.9
	206 205 203 203 202 201 201	
Devons.	199.5 181.7 198.8 208.1 96.5 76.8	961-4
y South De	08 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	340
Tass 12—Dairy	119.5 1111.7 108.8 108.1 96.5 76.8	621.4
Class	194 192 198 198 197	
18	252.3 165.1 151.9 221.7 142.6 133.6	1057.2
8—British Friesians	96     22	160
Jass 8—Britis	162.3 165.1 161.9 151.7 142.6 133.6	897.2
Cir	139 137 134 148 151	

THE BLEDISLOG TROPHY TEAMS AND POINTS GAINED, DAIRY SHOW, 1925-Continued.

TO .	Class 14—Red Polls.	d Polls.	Parameter and the second secon		Class 19—Ayrshires	Ayrshires		Ω	Class 21—Guernseys	quernseys	
No. in Catalogue.	Milk Trial Points	Insp. Points	Total Points.	No. in Catalogue.	Milk Trial Points.	Insp. Points.	Total Points	No. in Milk Tri Catalogue Points.	Milk Trial Points.	Insp Points.	Total Points.
208	146.4	80	226.4	269	165.2	100	265.2	306	106.6	100	206.6
212	135.9	<b>3</b> 6	225.9	256 96.1	144.3	<u>8</u> 2	234.3	308	83.2	-	83.5
216	134.4		127.5	257	137.0	) S	217.0	307	77.2	80	167.2
215 215	113.1	100	213.1	271 254	135·6 132·5	1 1	135·6 132·5	298 312	70.7	70	70.1
	752.6	340	1092.6		855.3	340	1195.3		499 7	250	749 7
	Class 24—Jerseys.	ersevs.			(Лам. 27.—Кеплем	Kernes,		-			
344	120.1	100	220 1	394	134.2	100	234 2				
352	111.9	Name of Street, or other Designation of Street, or other Desig	110.1	980	103.1	8	103 1				
351	107.7	I	107.7	398	98.5	70	168.5				
342 353	107.3 107.3		107·3 107·3	399 397	97.9	06	97.9 185.2	ı			
	664.4	100	764.4		652.5	340	992.5	, ,			
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	CLASS No.	Tı	Milk rial Points.	Inspection Points.	TOTAL.	
19	Ayrshires		$855 \cdot 3$	340	$1195 \cdot 3$	Winner.
14	7 7 70 11	• • •	$752 \cdot 6$	340	$1092 \cdot 6$	Reserve.
4	Non-Pedigree Shorth	orns	730.0	340	1070.0	
8	British Friesians		897.2	160	$1057 \cdot 2$	
27	Kerries		$652 \cdot 5$	340	$992 \cdot 5$	
1	Pedigree Shorthorn		734.7	250	984.7	
12	Dairy South Devons		$621 \cdot 4$	340	$961 \cdot 4$	
	Lincoln Red Shortho		$797 \cdot 1$	80	$877 \cdot 1$	
13	Devons		662 - 9	160	$822 \cdot 9$	
24	Jerseys		$664 \cdot 4$	100	$764 \cdot 4$	
			499.7	250	749.7	

The Ayrshire Cattle Herd Book Society hold the Trophy for the third year in succession, with the Red Poll Cattle Society as Reserve.

(7) The Morrison Challenge Trophy, awarded to the owner of the cow exhibited at three consecutive Dairy Shows gaining the greatest number of points on the following basis:—Milking Trials, points above class standard; Butter Tests, three times the points above class standard; Inspection, first prize 40 points, second prize 30 points, third prize 20 points, fourth prize or reserve 10 points.

Four cows were entered for this trophy and three were present at the Show. The winner was Mr. A. B. Croxon, Burnham-on-Crouch, Essex, with the non-pedigree Shorthorn cow "Spot" (No. 77), and the reserve was Lt.-Col. R. E. Cecil, Lymington, Hants, with the Ayrshire cow "Netherton Queen Greenfield 4th" (No. 253).

The winner's record at the Shows of 1923, 1924, and 1925 is a remarkably good one, and is set out in full below:—

	Cata-	M	ilking Trial	ls.		Butter Test	š.	Inspe	ction.
Year.	logue No.	Points.	Standard.	Net Points.	Points.	Standard.	Net Points.	Award.	Points.
1923	97	166.6	110	56-6	$52 \cdot 5$	34	55 • 5	-	
1924	67	142.5	110	$32 \cdot 5$	40.5	34	19.5	2nd	30
1925	77	145.9	110	35.9	36.0	34	6.0	1st	40
			Totals	125.0		1	81.0		70

GRAND TOTAL ... 276.0 points.

(8) The Robert L. Mond Special Prize of £10 awarded to the owner of the two animals, competing in the Milking Trials, which are the progeny of a registered bull of the same breed, and which gain the largest number of points above their class standard, and are certified as true to type by the Class Inspection Judge.

Entries for this prize have been very limited in numbers in past years, but in 1925 there were 13 entries, comprising five Ayrshire bulls, three Dairy Shorthorns, two Lincoln Red Shorthorns, two Jerseys, and one British Friesian.

The winner was found to be Mr. John Cochrane, Thornhill, Dumfriesshire, with two Ayrshire heifers, the progeny of the bull "Cairnmill Lord Glenside" (20970); the second prize of £5, donated by the Countess de la Warr, was won by Major C. R. Dudgeon, Cargen Holm, Dumfries, with an Ayrshire cow and heifer, the progeny of the bull "Thornhill Mount Royal" (19147); another two heifers owned by the same exhibitor and by the same bull came next in order of position, followed by two Lincoln Red Shorthorn heifers exhibited by Mr. J. Evens. Lincoln.

The points gained by the leading competitors are given below:-

Progeny of Cairnmill Lord Glenside (20970). (Ayrshire.)

Cata- logue No.	M Tria	ulking d Points. S	Class Standard. 1	Balance. Total.
287 Byreholm Viper 2nd		115.5	60	55.5 ) 95.9
288 Byreholm Diamond		89.8	60	$55.5 \\ 29.8$ $85.3$
Progeny of Thornhill M	<b>l</b> ount	Royal (1		Ayrshire.)
254 Cargen Holm Proud Lady	$8  ext{th}$	132.5	90	$ \begin{array}{c} 42.5 \\ 37.8 \\ 36.5 \\ 34.9 \end{array} \right\} 80.3 $
279 Cargen Holm White Stocki	ings			≻ 80.3
10th		97.8	60	37.8
280 Cargen Holm Miss Robb 18	$5 ext{th}$	96.5	60	36.5 )
278 Cargen Holm Proud La	ıdy			> 71.4
10th	• • •	94.9	60	34·9 J
Progeny of Burton Mou	ılton (	(11400).	(Lincoln	n Red.)
106 Burton Ethel 8th	]	$122 \cdot 6$	100	$\frac{22.6}{45.8}$ $\}$ $68.4$
107 Burton Hempy 9th	]	l <b>45·</b> 8	100	$45.8 \int 00.4$

In view of the keen interest taken in the inter-breed aspect of the competition for the above cups and trophies, it is interesting to tabulate the breed of the winner and the reserve in each case.

	Breed of Wi	nner.		Breed of Reserve.
B.D.F.A. Gold Medal	 Ayrshire	•••		British Friesian.
Barham Cup	Ayrshire	•••		British Friesian.
Spencer Cup	 British Friesia	$\mathbf{n}$		Ayrshire.
Shirley Cup	 Ayrshire			British Friesian.
National Milk Cup	Kerry			Ayrshire.
Bledisloe Trophy	 Ayrshire	•••		Red Poll.
Morrison Trophy	Dairy Shortho	rn (noi	<b>1</b> -	Ayrshire.
	pedigree)	·		
R. L. Mond Prize	 			Ayrshire.

The following tables supply much valuable information on the performances of the different breed classes at the 1925 and other recent Shows, and affords opportunities for many interesting comparisons:—

- Table I contains in summarised form the entries, the average live weight, milk yield, fat percentage and points earned and lost in each class, also the average milk yield and points per 1,000 lbs. live weight.
- Table II shows the number of cows and heifers tested, average points gained, number of animals attaining the Association's standard points, and average live weights of each class at the last three Shows.
- Table III shows the average points gained in the Milking Trials each year since 1913.
- Table IV shows the highest points gained in each class each year since 1913.
- Table V shows the average yield and quality of the milk yielded by each class at the 1925 Show.
- Table VI shows the number of animals yielding milk deficient in fat and solids-other-than-fat in each class of each Show since 1914.

## LABLE I.

	110 12 000 01 1 1 0000 , 1921.	01
A.T.G. Standard Points seafO tot	100 110 110 110 100 100 100 100 100 100	
Average Points gained by Class.	108.2 121.7 116.4 123.8 114.9 103.6 103.5 104.1 128.3 104.1 17.5 17.5 95.3 105.6 77.8 137.8	
Points per 1,000 lbs. Live Weight.	83.1 89.7 87.3 89.8 89.8 72.1 72.1 79.4 90.5 100.4 111.6 101.4 99.0	
Average Points lost by Class for Quality of Milk.	1.6 Nil 2.7 6.4 6.4 Nil Nil Nil Nil Nil Nil Nil 1.6 1.6 1.4 3.3 1.2.0	
slsminA since gursol state to the state of t	% 16.6 Nii 18.2 35.7 Nii Nii Nii Nii Nii Nii 18.7 12.5 16.6 14.3 33.3	
Animals below Standard for Fat A.M. or P.M.	16.6 16.6 18.2 28.6 18.2 18.2 Nil Nil Nil Nil Nil Nil Nil Nil 12.5 12.5 14.3 33.3	
Average Fat.	$\begin{smallmatrix} 6 & 4 & 4 & 4 & 6 & 6 \\ 0 & 1 & 1 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 \\ 0 & 1 & 1 $	
Yield of Milk per 1,000 lbs. Live Weight.	1bs. 1 bs. 2 cs. 2	
Average Yield Of Milk.	108. 108.	
Average Live Weight of Class.	owts. lbs.  11 92 12 13 12 6 12 49 14 53 11 83 11 83 10 42 10 96 8 45 8 50 6 84 12 60	
nt nt	3014 v 200000000000000000000000000000000000	123
Number in Class. Prese Entered in Trad	26 21 44 4 4 6 20 20 20 20 20 20 20 20 20 20 20 20 20	217
Description.	Dairy Shorthorn Dairy Shorthorn Ditto Non-Pedigree Lincoln Red Shorthorn British Friesian South Devon (Herd Book Society) Society) Bootety Devon Red Poll Blue Albion Welsh Black Ayrshire Guernsey Jersey Jersey Merry Merry May Breed (milked 3 times)	Carried forward
Class.	1 4 4 6 6 6 6 6 8 8 8 8 8 11 11 11 11 11 11 11 11 11 11	

Table I.—Continued.

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	A. soints	F D.F. brabhats for Cla			883	83	2.2	 	99 2	99	33	99	9	26	9 6	99			
	Average	Points gained by Class.			92.8	97.7	76·6 92·5		73.3	9.78	87.9	0.98	€06 1	98. 98.	7.00	53.0 8.0 8.0			
	s.	Point per 1,000 Live We			72 6	83.1	84·3 104·6		64·5 65·9	74.0	$67 \cdot 1$	77.1	83.1	9.18	00.00	6.86			
	Average Points	lost by Class for Quality of Milk.			0.02	2.5	$^{2\cdot2}_{ ext{N1}}$		2.3 Zij	0.#	Nıl	2.0	9.0	0.01	) - T	Ī			
	stnic Till	sminA A gnizol suQ tot liM to	%		20.0	25·0	11 · 11		15.4 Nil	20.0	Nil	20.0	9.9	20.0	0.07	TN.			
	Animals below	Standard for Fat A.M. or P.M.	%	***	20.0	o.Ff	ZZ		15.4 Nil	Nil	III	EZ:	Z;	Nii.	0.72	T.			
• 5	9 <u>3</u>	rigya Lau	%		3.89	7.8e	$\frac{4.96}{5.29}$		3.90	4.32	3.97	4.39	4.53	4.57	00.0	57 H			
	.sdl (	Yield of per 1,000 Live We	lbs.		34.1	35.0	35·1 40·9		29.5	34.2	29.5	33.6	36.6	39.T	9.06	e: 0 <del>+</del>			
	F. I Se	rigyA bleiY iM to	lbs.		0.44	6.10	31·9 35·9		34.0	40.0	30.0	38.6	40.6	32.5	0.77	21.9			
	A	Average Live Weight of Class.	cwts. lbs.				8 12 7 94		10 34 10 14			,	_		_				
	ımber in Class.	Entered Milking Trials.	123		10	- +	- II		13	īG	က			# 5	2 6	>		526	
	Number in Class.	Entered	217		25	9	12 18		26 13	13	Ξ	15	7.	љ <sub>С</sub>	3 ×	<del>- 1</del> 1		435	
не в доступности дене в пределение и пред дене в п		Description.	Brought forward	Cows over 3 and under 5 years old.	:		Guernsey Jersey	Heters.	Dairy Shorthorn Ditto	orthorn	British Friesian	:	Ayrsnire	:					
	's	Sal			87 05	15	52 52	 	ಲು ಬ	-	9 5	9 6	2 6	9 %	200	30	-		

Table II.—Showing Number of Cows Tested, Average Points Gained and the Number of Cows attaining the Society's Standard—1923 to 1925.

				2	AND	T	070						Ì			-			
Class.	Description.	B.D.T.A. Standard Points.	700	No. of Cows Tested.	, - ga	Aver (	Average Pomts Gained.	ints		Number Cows	and	Number and Percentage of Cows above Standard	age c	<u> </u>	×	Aver 'eigh	Average Live Weight of Class.	ive Jass.	
		:		923 1924 1925		1923	1924	1925		1923		1924	15	925	1923		1924	1925	15
					!					ò°		%		%	cwt.	lb.cwt.		lb. cwt. lb.	1b.
_	Dairy Shorthorn—Pedioree	100		6	12 1	14.4	109.5	108.2	15	9.02	-	17.7	<u></u>	58.3	23	1612	77	= :	35
٠ ٥	Ditto (over 2 and under 5 vears)	8		15		6.001	88.3	8.76	9	85.7	σ.	0.09	9	0.09	_	$85_{1}11$		Ξ	28
4 6		99	<u>65</u>	9	65	67.2	$61 \cdot 0$	73.3	9	1.97	01	33.3	œ	$61 \cdot 5$	6	08 10	20.1	9	£
o -		110	7	75	9.7	4.	03.0	121 - 7	īC	T. GT	ŝ	20 0	10	83.3	12	7,12	<del>†</del> 9	15	23
<del>1</del> 4 7		G C	10		, cr	200	8.99	73.3	œ	88.8	,	50.0	61	9.99	10	87/10	20	10	<u>+</u>
Q °	Tito mellers	9		10		6.7	80	115.4	5	0.06	cr:	33.3	00	72.7	12	75/12	55	12	9
01	٦,	88	-1	000	1 10	88.0	65.	9.78	9	2.08	+	50.0	ũ	0.00	10	30110	67	10	48
- 0	7 .	9 5		0 0	11	0 66	18.9	193.8	6	50.0	9	9.99	0.	64 3	12	83/12	106	15	67
oo	ຸ`	6	 	9	1	17.4	108.8	8.611	Ξ	100.0	13	81.3	9	85.7	2	212	16 13		5
50 0		1 5		- 2	٠.	75.6	85.0	6.78	-	50.0	+	9 99	2	9 99	12	28 11	36	11 1	105
2;	Ditto mellers	2 5		,		0.5	9	114.0	6	9.99			_	50.0	<u>+</u>	56	1	14	53
П	South Devon (Herd Book Soc.)	35	- •	1	7 0	2.4.		9.601	1	-			, +	9.99	۱		-	6	9
12	South Devon (Rec. Cattle Soc.)	3		"	0		0	0.601	7	١٥	9	0 00	Ην	2 6	-	01/06	- 00	- ج	3
13	Devon	8		30	20	99.7	93.6	103.2	+ -	0.08	N (	0.00	O, Y	0.70	11	01100			9 6
14	Red Poll	30	9	-1	9	16.7	92.1	125.4	4	9.99	2/	28.8	o.	83	2;	0700	_	<b>~</b> :	300
12	Ditto (over 3 and under 5 years)	83	6	10	₩	95.5	9.68	97.7	-	11 1	9	0.09	ೞ	75.0	9	02/10			7 S
18	Ditto Heifers	99	9	6	10	72.0	71.5	0.98	ō	83.3	9	9.99	4	0 08	G.	6 9	52 10		200
2.2	_	100	23	9	70	78 3	$100 \cdot 3$	128.3	0	Z	4	9.99	+	0.08	10	73 11	#	27	2
×	Welsh Black	96	1	1	63	1	I	104.1				1	<u></u>	0.00			1	9	22
01	Awshire	06	9	00	16 11	28.5	134.1	121.7	ĭΟ	83.3	œ	100.001	2	81.3	10	1610	8	20	96
36	Ditto Heifers	99	10	10	15	9.78	93.2	₹.06	c:	0.06	10	100	15	0.00	6	6 6	73	о Г	8
6		85	4	10	00	0.77	77.4	77.5		25.0	_	50.02	01	25.0	œ	6. 9/	37	<u>ت</u>	55
22	Ditto (over 3 and under 5 years)	71	9	00	G	0.76	$82 \cdot 3$	9.94	9	100.0	9	15.0	_	77.77	<b>∞</b>	32	7	<b>30</b> 1	21
23	Ditto Herfers	56	21	6	4	77.5	76.2	8.89	_	20.0	œ	88.8	ಣ	15.0	_	36	5/2	- 0	90
24		06	53	Ţ6	15	8.68	91.9	95.3	13	54.5	<u></u>	56.3	 	9.99	7	57 7	90	) )	<del>1</del>
36	Ditto (over 3 and under 5 years)	75		-	11	i		92.5	1	1			=	0.00	-		1	_	<b>#</b>
28	Ditto Heifers	90	16	34	10	8.04	87 7	68.7	13	81.3	57	9.02	iO	50.0	9	74 7	7	<u>۔</u> ت	01
ì			-			8.19	6.69	-		_									
27	Kerry	80	1	_ _	7	0.78	79.6	105.6	4	57.1	ç	9.99	-	0.001	œ	00		<b>30</b> :	9
86	Ditto Heifers	53	<del>-1</del>	70		0.67	38.6	0.69	_	25.0		20.0	-	0.001	ဗ	57 6	<del>2</del>	æ	99
6	٠ ـ	92	4	-	ಣ	0.69	1	8 8/	_	25.0	-	-	63	9.99	9		 	တ္	œ :
£ 6	Ditto Heifers	47	4	67	_	46.6	58.9	53.8	ତା	50.0	Ø	100.0	_	100.0			52	-#	9
3.5		:	70	60	5	12.7	137.0	137.8		1	1	-	1	-	<u>্</u>	48/12		<u> </u>	3
5	,							-											<u>'</u>

		1100 1110000109	1111110, 1	.0201
	Dexter Cows.	61.3 53.6 40.4 57.8 59.7 59.0	58·7 70	68.0 66.6 66.6 70.9 70.9 86.4
	Kerry Heifers.	54.0 449.3 388.6 69.0	51·6 53	693.4.2 697.4.3.4.2
	Ketty Cows.	68.3 69.6 72.1 76.5 76.3 87.0 79.6	79.3	1 93.7 5 5 6 7 4 101.3 4 107.9 3 85.0 9 114.8 7 7103.7
1913.	Jersey Cows,	880.8 850.3 850.3 850.3 890.8 890.8	85.5	123.1 112.2 104.5 99.4 120.1 100.4 119.3 119.3
SINCE	Guernsey Heffers.	63.9 67.1 67.1 68.8 68.8	67.2	82.4 73.8 83.7.7 78.8 83.7.7 102.7 92.6 86.8
R SIA	Guernsey Cows.	77 88 82 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	82.7	SINGE 191
YEAR	Ayrshire Heifers.	78.5 87.6 93.2	87 4	1 SINOE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
EACH	Ayrshire Cows.	- 107.6 - 106.7 - 106.7 - 106.7 - 95.7 78.3128.5 00.3134.1	115.7	Year R 130.2 116.8 120.0 150.3 156.3 165.2
TRIALS	Blue Albion Cows.	78.31 100.31 128.31	102 3	EACH
	Red Poll Heffers.	68.8 65.0 78.0 72.1 69.5 69.5 71.510 86.011	71.4[102	81.2 98.1 98.1 96.2 96.2 81.2 81.2 80.8 94.6 93.1
Milking	Red Poll Cows.	95.5 88.8 88.8 91.8 91.5 116.7	99-6'101-1 90   100	IS GAINED 120.5 81. 144.9 98. 107.0 82.9119.0 92.122.6 80. 3.142.7 94. 1 124. 7 94. 1 124. 7 94. 1 124. 8 93. 5 146.4107.
THE I	Devon Cows.	102 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		OIN. 1111-1127-132-126-126-1135-1135-1135-1135-1135-1135-1135-113
IN	South Devon	103.9 	77 - 7 103 - 3	
GAINED	British Friesian Heiters.			Highest    115   1
	British Friesian Cows.	80.7 80.7 92.3 83.1 98.2 133.6 120.2 135.0 118.2	74·7 109·5	HE 103.6 1117.1 1155.6 155.6 155.6 155.4 155.7 1553.4 1553.4 1553.4 1653.4 1653.4
Points	Lincolnshire Red Shorthorn Heiters.	69.0 67.7 67.7 68.3 86.0 88.1 71.4 71.4 88.9 88.9 85.1		
AGE	Lincolnahire Red Shorthorn SwoO	75.2.9 95.7 73.6 96.9 89.2 98.4 76.9 85.6 73.0113.2 66.8 93.8 73.3 1114.2	101.3	Table IV.—Showing 6158.0102.1114.8 81. 1138.9 97.6105.5 77. 1149.5101.7111.2 80. 10129.1 96.1115.1100. 1018.8 87.5157.1 96. 1129.8 88.2150.6 82. 1129.8 88.2150.6 82. 1129.8 88.2150.6 82. 1129.8 88.2150.6 82. 1129.8 88.2150.6 82. 1129.9 88.2150.6 82.
AVERAGE	Dairy Short- horns Yon-Ped Heilers,	7.7.7.7.3.6.2.7.7.3.6.2.7.7.3.6.2.7.7.3.6.2.7.7.3.6.2.2.3.6.2.2.3.6.2.2.3.6.2.2.3.6.2.2.3.6.2.2.3.6.2.2.3.6.2.2.2.2	76 - 6   101	IV.— 102.1 97.6 118.8 118.8 87.5 87.5 88.2 116.5 83.1
— <u>—</u> ——————————————————————————————————	Dairy Shorthorns. Non-Pedigree.	63.2117.1 62.4106.9 65.5118.5 69.6 95.0 60.9111.8 72.1108.1 67.2111.4 61.0 93.0	64.7110.2	TABLE 61158 .0 61158 .0 61129 .1 61129 .1 61129 .1 61129 .1 61129 .5 61120 .0 61120 .5 61150 .0
ABLE	Dairy Shorthorns. Ped. Heifers.	63.2 62.4 65.5 66.5 60.9 61.6 61.6 61.0 73.3		83 98 69 87 81 81 90 101
$T_{A}$	Dairy Shorthorns. Ped. 3 5 yrs.	75.4 79.7 79.7 96.3 94.9 100.9 88.3	89.8	.6 .8 .8 .8 .8 .9 .1 .7 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1
	Dairy Shorthorns. Pedigree.	96.2 106.5 103.5 95.2 97.4 103.9 107.7 114.4 109.5	104.1	127.6 — — — — — — — — — — — — — — — — — — —
	Year.	1913 1914 1916 1916 1920 1922 1922 1923	Average Points of last Ten Shows B.D.F.A. Glass Standard	1913 1914 1916 1916 1920 1922 1922 1924 1924

5 SHOW.
1925
MILK.
OF
QUALITY
AND
QUANTITY
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TABLE

Chass No.  1 Dairty 6 5 Lincoln 7 7 British 9 10 South 1 11 South 1 12 Di	Shorthorn— Shorthorn— Shorthorn— Shorthorn— Shorthorn— Ditto Friesian (City) Devon (Here	nm—Pedigree	d under 5 y ree Heitens rs under 5 yee	 5 years)	Io .oV	o, of petito	Weight of Milk.	ر څ	Total Weight	Ħ		Soli	Solids—	Total	tal
	Shorthorn— Ditto Ditto Ditto O'Shorthorn— Ditto In Red Short Ditto Ditto Ditto Ditto Ditto Ditto Herissian	Pedigree (over 3 and Hericus Non-pedig ditto horn horn Heifer di Book Soc arded Catti.	1 under ree Heift rs under 5 inety)	5 years)		u			Till:		Fat.		rat.	Soli	ds
	Shorthorn— Ditto Ditto Ditto Oitto Oitto Oitto Oitto Oitto Oitto Oitto Ditto D	Pedigree (over 3 and felers Non-pedig ditto horn Heifers wer 3 and elers wer 3 and elers di Book Soc orded Catt.	1 under ree Heift rs under 5 inety)	 5 years)		<u> </u>	Morn.	Even		Morn.	Even.	Morn.	Even	Morn.	Even.
	Shorthorn— Ditto Ditto Ditto Oisto Shorthorn— Ditto In Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Herissian Ditto Herissian Ditto Herissian Ditto	Pedigree (over 3 and Heriters Non-pedig ditto horn Heriters Herite	1 under Heift rs under 5 iety)	 5 years)		,	lbs.	lbs.	lbs.	%	%	%	%	00	36
The second contracts with the St.	Ditto	lover 3 and Heifers Non-pedigd ditto horn Heifer wer 3 and deifers d Book Soc	1 under ree Heift rs under 5 inety)	5 years)			27.5	22.7	50.2	3.68	17.7	9 17	9 01	12.85	13.48
THE RESERVE OF THE RE	Ditto  Titto  Titto  Ditto  Di	Heifers Non-pedign ditto horn Heife  ver 3 and leifers d Book Sox	ree Heift rs under 5 isty)	•	:	01	23.6	50.4	44.0	3.41	4.37	9.29	60.6	12.70	13.46
and the second s	r Shorthorn— Ditto Ditto Ditto ah Friesian Ditto H Ditto H Ditto H Ditto H Ditto H Ditto (Rea	Non-pedigranditto horn Heife nver 3 and leifers d Book Soc	ree rs under 5 iiety)	:	-	- 2	18.6	15.4	34 0	3.75	4 05	9.34	9 28	13.09	13.33
and the second s	Ditto Ditto Ditto Ditto Sh Friesian Ditto	horn Heife  " H	Heife  rs under 5 iiety) le Societ	: :		9	30.0	24.8	54.8	. 3 86	4.42	98 6	9.19	13.22	13.61
AND	In Red Shortl Ditto sh Friesian Ditto (o Ditto H a Devon (Herr Ditto (Rev	horn Heife Heife  wer 3 and leifers d Book Soc	rs under 5  nety)	3rs		60	18.2	15.1	33.3	3.70	4.05	9 43	9 33	13 13	13.38
THE R. LEWIS CO., LANSING, MICHIGAN,	Ditto bh Friesian Ditto (o Ditto H Ditto H a Devon (Herr Ditto (Reco	Heife  ver 3 and leifers d Book Soc	rs under 5 nety) le Societ.	:			8.66	25.1	54.9	3.40	4.35	9.13	8.99	12.53	13.34
	,	ver 3 and teifers d Book Soc	under 5  siety) le Societ	:		50	$21 \cdot 5$	18.5	0.0+	3.72	4 93	60.6	8.89	12.81	13.82
	, Pag	ver 3 and eifers d Book Soc orded Catt	under 5  siety) le Societ	:		14	33.4	27.9	61 3	3.51	4.06	8.99	8.86	12.50	12.92
	He (Re	eifers d Book Soc orded Catt	 nety) le Societ	vears)	:	-	33.0	28.3	61.3	3.42	4.27	8.67	99-8	12.09	12.93
	~~ .	1 Book Soc orded Catt	iety) le Societ			CC	21.6	17.4	39.0	4.02	3.93	10 6	9.13	13.03	13.06
		orded Catt	le Society	: :	: :	- - 61	23.7	19.61	43.3	5.30	7.01	9.50	9.16	. 08 ₹1	16.17
Deve	:		•	(^		- 9	23.5	19.0	49 5	4.83	4.77	9 16	60-6	13.99	13.86
-		:	:	:	-	00	24.4	20.5	6.44	4.53	4.36	9.37	9.50	13.90	13.56
,	Red Poll		: :	: :			8.67	26.1	55.9	3.96	11.11	9.29	83 83	13.55	13.60
	_	over 3 and under 5	Ą	;		4	23.0	18.7	41 7	5.05	4.67	9.25	96 8	14.30	13.63
			:		_	 	21.2	17.4	38 6	4.03	4.75	9.34	8.90	13.37	13.65
	Ę			:		 	31.4	25 9	57.3	3.98	18.+	6 50	8.72	13.18	13.53
	Welsh Black		:	:		63	23.3	20.3	+3.6	5.53	4.78	8.8	8.84	14.37	13.62
	hire		:	:	:	16	31.2	25 4	56 6	3.66	4.93	8.87	8.76	12.53	13.69
	Heifers	:	:	:	:	15	22.1	18.5	9.0*	4.13	4.94	86.8	86.8	13.11	14.12
	sev	:	:	:	:	oc	16.8	13.1	29.9	5.09	5.97	25. 26.	9.05	10.71	15.02
	_	over 3 and under 5	vears)	:	:	G	17.9	1+.0	31.9	‡·3‡	5.59	85.00	8 79	13.32	14.38
_		:	` :	:	:	+	18.1	14.7	35.8	+1.+	2.00	89 80	8.75	78.7	13.75
		:	:	:	:	12	20.5	17 +	37.9	4.95	5.56	8.87	3.01	13.77	14.57
	_	over 3 and under 5 years)	rears)	:		- 11	9.61	16 3	35.9	10.9	5.57	9.55	86.8	14.23	14.55
	,	•	. ;	į	-	10	14.5	12.4	26.9	₹.70	00.9	9.55	6.33	14.25	15.33
	` _	: :	: :	:		<b>-</b>	25.1	$21 \cdot 5$	9 9†	3.80	5.02	9.17	70·6	12.97	14.06
	Heifers			;		 م	15.6	13.6	29.5	3.67	4.79	9.57	9:36	13.24	14.15
	١.	: :		: :			19.5	16.0	35.5	3 77	4.00	8.75	8.83	12.52	12.83
	Heifers	:	:	:	:		11.2	10.7	21.9	4.92	5.52	10.24	10.20	15.16	15.72
						1	1	-1-	-			-			

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WILK DEFICIENT IN FAT AND OTHER SOLIDS.
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92		The Minking Trials, 1925.		
1		000000000000000000000000000000000000000	11	226
1	lids.	10   11   0   0   0   0   0   0   0   0	17	239
	Less than 8.5 per cent, of other Solids	80000   0	15	219
IDS.	of ot	1922	12	253
Solids	eent.	1921	18	220
THER	.5 ре	11920 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	53	183
O E	han 8	19	1-	1145
FAT AND OTHER	Less t		0	85
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EFIC		100000000000000000000000000000000000000	36	239
_	Fat.	8011110   0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	21	219
NG M	nt, of	1932 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	56	253
ANIMALS YIELDING MILK	per ce	1937   1   1   1   1   1   1   1   1   1	18	220
S. Y.	Less than 3 per cent, of Fat.	1920 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	34	183
NIMA]	Less t	1   9   1   0 0 0   0   1   1   20 0 1 1 1 1 2 1 2 2 2 2 2 2 2 2 2 2 2	23	145
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NUMBER OF		1912   1824   1834   18	ଝା	05
NOW		arrs);	:	105
VI.		Dairy Shorthorn—Pedigree  Ditto Heriers  Ditto Heriers  Ditto Heriers  Lincoln Red Shorthorn—Non-Pedigree  Lincoln Red Shorthorn  Ditto Heriers  Ditto Heriers  Ditto Heriers  Ditto Heriers  Ditto Heriers  Ditto Heriers  Ditto (over 3 and under 5 years)  Ditto (over 3 and under 5 years)  Ditto Heriers  Ditto (over 3 and under 5 years)  Ditto Heriers  Ditto Her	:	Number of Animals Tested
TABLE V	Breed and Class.	horthorn—Pedigree  to (over 3 and under 5 for Heifers horthorn—Non-Pedigree horthorn—Non-Pedigree horthorn—Non-Pedigree horthorn—Non-Pedigree hitto Heifers heifers horthorn heifers horthorn heifers horthorn hor	÷	imals
	d and	m—Pec (over 3) Heritors m—No horthor horthor n (over 3) Heritor B Heritor B Heritor r 3 and ers r 3 and ers r 3 and ers s s s s s s	:	of An
	Bree	Shorthorn- itto He Shorthorn- Ditto He Ditto Ditto Ditto Ho Ditto Ho Ditto Ho Ho Ditto Ho Devon (He Ho	al	mber
-		Dairy Shorthorn—Pedigree  Ditto dover 3 and under and bitto Heifers  Ditto Heifers  Lincoln Red Shorthorn  Ditto Heifers  Ditto Over 3 and under Ditto Heifers  Ditto Gover 3 and under Ditto Heifers  Ditto Gover 3 and under Ditto Heifers  Ditto Heifers  Ditto Gover 3 and under 5 yr Ditto Heifers  Ayrshire  Ayrshire  Ditto Heifers  Ditto Gover 3 and under 5 yr Ditto Gover 3 and under 5 yr Ditto Heifers  Ayrshire  Guernsey  Ditto Heifers	Total	Nu
-	1	Dairy Dairy Dairy Lincoll Dairy Direct Direct Ditto Ditto Ditto Blue Ditto Ditto Cauenus Ditto D		-

MILKING TRIALS, 1925. Class 1.—DAIRY SHORTHORN COWS (Entered in or Eligible for Coates' Herd Book, or its Pedigree

THE SHOW. BORN ON PREVIOUS TO IST AUGUST, 1920).	3 4	Evening Princess Rickensvote Foggathorpe Barrington Empress 3rd. Wild Eyes Lady.	May 17, 1919. Jan. 25, 1920. July 15, 1918. Nov. 13, 1918	1,368	27. May 28. Sept. 15.		n Even Morn Even Morn Even M	19.1 28.1 24.5 22.4 19.0 27.0	18.5 30.1 24.5 26.3 19.9 26.1		23.1 18.8 29.1 24.5 24.35 19.45 26.55 23.0	4.30 4.16	8.94 9.12 8.95 9.04 9.24 8.89	13.08 13.24 13.28 14.24 13.48 12.50 11.68 12.74	0.83  0.81  1.21  1.265  1.08  0.63  0.74  0.865	16.60 16.20 24.20 25.30 21.60 12.60 14.80 17.30	2.19 1.68 2.66 2.18 2.19 1.8 2.34 2.07	8.76 6.72 10.64 8.72 8.76 7.2 9.36 8.28	10.4	71, 800		15.5 19.4 16.0 17.6	90.2 132.9 94.0 99.2	The state of the s	0.00	90.2 132.9 94.0 89.2
SENT FOR SUCH ENTRY PREVIOUS TO THE SHOW.	Number	Name	Born	, in lbs	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day	Total	Average	Fat	of o	the Milk. (Total Solids	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For time since Calving		Fourts \ for weight of Fat (1bs. \times 20) For weight of Solids other than Fat	(Ibs. × 4)	Total	Deductions	Points gained	

- 1	CLASS I.—DAIRY SHORTHORN COWS (BORN ON OR PREVIOUS TO IST APPERS, 1920)—Continued.	SHOR	THORI	Ö	OWS (Bo	RN ON O	R PREVIO	us to lar	r Areusi	r, 1920)—	-Continue	7
	Number	:	:	:		9	,,,	8	Kinesth J.	10	1	
		:	:	:	Pencoyd B	lanche 2nd.	Rickerscote	••• Pencoyd Blanche 2nd, Rickerscote Rosannah Kinh 2nd	Ruby	2nd	Huffon Daffodul 2nd	fodil 2nd
	Born	:	÷	÷	April 15, 1920.	5, 1920.	Jan 2ĉ	Jan 25, 1919	June 16, 1918.	s, 1918.	Aug. 19, 1917.	, 1917.
	Live weight, in lbs	:	:	:	1,186	98	1,748	48	1,230	30	1,381	31
	Last Calved	:	:	:	Sept. 8.	×.	Sept. 8.	∞; ∞;	Oct 6.	<u>ن</u> .	Oct. 4.	→,
	Days since Calving	:	:	:	4	1	*	T	<b>-</b>	13	LD	
					Morn	Even	Morn	Even	Morn	Even	Morn	Even
	Weight of Milk, 1st day	:	:	:	31.6	26.8	22.9	18.6	24.7	23.4	36.9	21.1
	Weight of Milk, 2nd day	:	:	:	32.5	25.7	22.8	18.3	28.5	23.3	27-7	22.1
	Total	:	:	:	64.1	52.5	45.7	36.9	53.2	46.7	54.6	43.2
	Average	:	÷	:	32.05	26.25	22 85	18.45	26.6	23.35	27.3	21.6
	Percentage (Fat	:	:	:	3.59	4.69	3.89	4.38	4.17	99.9	4.67	4.62
	$^{\sim}$	her tha	n Fat	:	9.03	9.15	9.37	9.32	9.45	9.12	9.43	80.6
	the Milk. (Total Solids	lids	:	:	12.62	13.84	13.26	13.70	13.63	15.80	14.10	13.70
	Actual weight of Fat, in lbs	:	:	:	91.1	1.23	68-0	0.81	1.15	1.56	1.28	0.99
	Calculation of Points multiply by 20	ply by	20	:	23.00	24.60	17.8	16.20	23.00	31.20	25.60	19.80
	Actual weight of Solids other than Fat, in lbs.	er than	Fat, in	lbs.	2.9	2.4	2.14	1.71	2.52	2.13	2.56	1.95
	Calculation of Points multiply by 4	ply by	4	:	11.6	9.6	8.56	6.84	10.08	8.52	10.24	7.80
	For time since Ca	ving	:	:	0		0.1	I	mandatoricum productive of the			
		(1bs.)	:	:	58.3	en	41.3	63	49.9	6	48.9	_
	Points $\langle \text{For weight of Fat (lbs.} \times 20) \rangle$	(1bs. $\times$	: 20) " +bor 1	: +	47.	·	34.0	0	54.	53	45.c	
	(Ibs. × 4)	anao en		3	21.2	2	15.4		18.6	9	18.0	
	,	Tota	Total	:	127.2	2	8.06	20	122.7	7	1123	~
		Dedı	Deductions	:	l	1	1		1	1	1	
		Poin	Points gained	3d	127.2	2	8.06	8	122.7	7	112.3	8
	D				2nd	2nd Prize.			Reser	Reserve and		
	Kemarks and Awards	:	:	:	Keserve for Desborough Cup.	ve for			Highly Commended,	shfy ended.	Highly Commended.	nly mded.
						,						

Continued.	26 Lady Dorsen	2	1.247	Sept. 17.	32	a	32.5 26.2			33.2 26.0		8.76 8.81	12.26 12.94	1.16 1.07	23.20 21.40	2.91 2.3	11.64 9.2	59.2 41.6	20.8	124.6	124.6	3rd Prize.
COWS (BORN ON OR PREVIOUS TO INT AUGUST, 1920)-Continued.	Para of hom Bonne Lade	004 7 1018	1.186	Oct. 5.	11	п	24.3 21.2	24.8 19.8		24.55 20.5	Contract of the Contract of th	9.24 8.95	12.64 13.16	0.84 0.86	16.80 17.20	2.27 1.83	9.08 7.32	45.0	16.4	F-96	95.4	
PREVIOUS TO 187	15 Ridoe Rosedale.	9101 01 AON	1.412	Oct. 2.	17	Ę	28.3 26.0			28.7 25.25		9.24 8.89	12.36 13.54	0.895 1.18	17.9 23.60	2.65   2.25	10.60 09.01	53.9 41.5	19.6	115.0	115.0	Highly Commended.
WS (BORN ON OF	14 Blosom's Bose	March 17 1018	1.336	Aug. 24.	99	п	31.6 25.9			31.15 25.35	2.83 3.70	99.8 66.8	11.82 12.36	0.88 0.94	17.60 18.80	2.80 2.2	11.20 8.8	1.6 56.5 36.4	20.0	114.5 10.0	104.5	Highly Commended.
CLASS 1,—DAIRY SHORTHORN CO	Number Name		Live weight, in lbs.	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day	Total	Атогаде	_	Composition of Solids other than Fat	the Milk. (Total Solids	Actual weight of Fat, in Ibs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For time since Calving  For weight of Milk (lbs.)  Points & For weight of Fast (lbs., 20)  For weight of East (lbs., 20)	(1bs. × 4)	Total Deductions	Points gained	Remarks and Awards

CLASS 2.—DAIRY SHORTHORN COWS (ENTERED IN OR ELIGIBLE FOR COATES' HERD BOOK, OR ITS PEDIGREE SENT FOR SUCH ENTRY PREVIOUS TO THE SHOW. BORN AFTER 1ST AUGUST, 1920, AND PREVIOUS TO 1ST AUGUST, 1922).

	1					,			-		1		1	1		1		î-				T-		1	1
_ ·	Pillices	, 1920.	05	11.	oc.	Even	20.4	20.5	40.6	20.3	3.84	8.88	12.72	0.78	15.60	1.79	7.16	1	7	ŭ	61	=	0	4	
31	Southudge Pintess	Dec. 28, 1920.	1,302	Sept. 11.	38	Morn	21.9	23.0	44.9	22.45	2.43	8.95	11.38	0.545	10.90	2.02	80.8		42.7	26.5	15.2	84.4	10.0	74.4	
0	Chaineid Valentine.	Oct. 1, 1920.	22	. 24.	50	Even	23.4	26.5	49.9	24.95	4 46	9.20	13.66	1111	22.20	2.3	9.5	9	9	ಣ	_	2	1	22	2nd Prize, Shorthorn Soc.'s Prize, Fo. with No. 35.
30	Chaineid	Oct. 1,	1,222	Aug	) TO	Morn	27.0	28.4	55.4	27.7	3.08	9.48	12.56	0.855	17.10	263	10-52	Ţ	52.6	39.3	19.7	113.2	1	113.2	2nd Prize, Shorthorn Soc.'s Prize Fo. with No. 35.
28	Spotless 45th.	Oct. 28, 1921.	1,376	. 21.	59	Even	14.0	12.3	26.3	13.15	5.67	9.05	14.72	₽1.0	14.80	1.19	4.76	9	23	4	0	5	1	5	The second secon
2	Sporte	Oct. 28	7,3	Aug	10	Morn	13.4	18.7	32.1	16.05	3.91	9.65	13.56	0.63	12.60	1.55	6.20	1.9	29.5	27.	11.0	69-5	(	69.5	
27	h Ringlet	, 1921.	80	. 25.	24	Even	27.8	24.9	52.7	26.35	4.61	9.37	13.98	1.22	24.40	2.47	.9.88		 oc	9	Ð	6	0	6	Reserve.
	Sudborough Ringlet	Dec. 1, 1921.	1,280	Sept. 25.	, ČŽ	Morn	26.5	28.4	54.9	27-45	2.79	6.67	12.46	0.76	15.20	2.65	10.60		53.8	39.6	20.5	113.9	10.0	103.9	Rese
:	:	:	:	:	:		:	:	:	:	:	:	:	:	:	lbs.	:	:	:		3:	:	:	3d	:
፥	:	÷	:	:	:		:	:	:	:	:	n Fat	:	:	20	Fat, in	4	:	:	For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat	:	Total	Deductions	Points gained	፥
:	:	:	:	:	:		:	:	:	:	÷	Solids other than Fat	ids	:	oly by	r than	ply by	ving	(lbs.)	(lbs. X	:	Tota	Dedt	Poin	i
፥	:	£	:	:	:		lay	day	:	: e	(Fat	lids oth	Total Solids	, in Ibs	multij	ds othe	multij	nce Cal	of Milk	of Fat	::				:
:	:	÷	n lbs.	:	lving		k, lst (	k, 2nd	Total	Average	_	of?	(To	of Fat	Points	of Soli	Points	For time since Calving	weight	veight	(Il)s. × 4)				Award
Number		Born	Live weight, in lbs.	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day		•		Composition	the Milk.	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	(For t		Points \ For v		•			Remarks and Awards

CLASS 2.—DAIRY SHORTHORN COWS (BORN AFTER 1ST AUGUST, 1920, AND PREVIOUS TO 1ST AUGUST, 1922)—Continued.

CLASS 2.—DAIRY SHORTHORN COWS (Born after 1st August, 1920, and previous to 1st August, 1922)—Continued. 22.85 Even 8.87 13.28 2.05 80.8 June 14, 1922. .4] 45.7 <u></u> 20.5 8.03 24.9 Lady Marsle. 1,182 Sept. 19. 30 3rd Prize. 6.60 6.601 45.0 17.8 50.1 Morn 9.76 27.25 8.93 21.80 12.04 9 2.44 ₹-0I 26.2 28.3 54.5 Lady Doreen 8th. July 5, 1922. 1,273 1.184.72 Even 13.05 9.0212.68 87 ( 3.66 13.3 25 9.6 1.97 Aug. 22. 58 28.320.010.3 60.4 60 4 Morn 5.56 15.25 9.152.56 0.52 10.40 689 15.3 15.2 30.5 3-41 : : : Actual weight of Solids other than Fat, in lbs. : : Points gained... : For weight of Solids other than Fat Deductions Percentage Fat ... .... Composition of Solids other than Fat For weight of Fat (lbs. × 20) : : : Calculation of Points multiply by 20... Calculation of Points multiply by 4 ... : : : : : Total For weight of Milk (lbs.) : : : Actual weight of Fat, in lbs. ... For time since Calving : Total Solids : : : : : Average ... Weight of Milk, 1st day Weight of Milk, 2nd day : Remarks and Awards ...  $(1bs. \times 4)$ Total Live weight, in lbs. Days since Calving : : Percentage the Milk. Last Calved Number ... : Name Points Born

CLASS 3.—DAIRY SHORTHORN HEIFERS (ENTERED IN OR ELIGIBLE FOR COAFES' HERD BOOK. BORN ON OR AFTER 1SP AUGUST, 1922).

			-								
:	:	:	:	51	,	54	4	55	10	20	56
:	:	:	:	Cressida	nom st	Barrington Lucy	on Lucy	Ashe Wild Duchess	Duches.	Penceyd Dany Gul	any Gul
:	:	:	-:	Sept. 17, 1922.	, 1922.	April 4, 1923.	, 1923.	March 13, 1923.	3, 1923.	Sept 15, 1922.	5, 1922.
Live weight, in lbs	;	:	:	1,185	ξ <u>ο</u>	963	~1	1,2	81	086	2
:	;	:	:	Oct. 6.		Aug. 20	. 20	Sept.	. 14.	Ang	18.
Days since Calving	:	:	:	13		ე <u>ი</u>		35	10	62	<b>C</b> 3
,				Morn	Even	Morn	Even	Morn	Even	Morn	Even
Weight of Milk, 1st day	፥	:	:	17.3	14.5	18.6	13.7	21.1	19.2	21.4	16.8
Weight of Milk, 2nd day	:	:	:	17.1	14.8	19.0	14.5	20.9	176	20.7	15.5
Total	:	:	:	34.4	293	37.6	28.2	45.0	36.8	42.1	32.3
Average	:	:	:	17.2	14 65	18.8	14.1	21.0	18.4	21.05	16.15
	:	:	:	4.58	4.28	4.48	4.01	3.58	4.90	3.42	3.66
$\gamma_{\rm jo}$	Solids other than Fat	n Fat	:	99.6	9.52	87.6	9.55	9.58	9.34	8.74	∞
the Milk. (Total Solids	Solids	:	:	14.24	13.80	13.96	13.56	13.16	14.24	12.16	12.50
Actual weight of Fat, in lbs	lbs	:	:	0.79	0 63	0.845	99.0	0.755	6.0	0.72	0.59
Calculation of Points multiply by 20	Itiply by ;	20	:	15.80	12.6	16.9	11.2	15.10	18.0	14.40	11.8
Actual weight of Solids other than Fat, in lbs.	ther than	Fat, in l	lbs.	1.66	1.39	1.79	1.34	2.03	1.72	1.84	1.4:3
Calculation of Points multiply by	Itiply by	::	:	6.64	5.56	7.16	5.36	80.8	88.9	7.36	5.72
For time since Calving	Salving	:	:	Authorities and a second second		2.0	0		Company of the last of the las	()	2
For weight of Milk (lbs.)	(Ilk (Ibs.)	:	-:	51.8	~	32.9	6	39.4	-	37.	0.7
For weight of Fat (lbs. $\times$ 20)	at (lbs. ×	20)	:	78.4	-	28.1	_	33.1	-	26.2	ে
For weight of Solids other than	olids other	r than F	Fat								
(lbs. $\times$ 4)	:	:	:	12.2	~	12.5	5	15.0	0	13.1	
	Tota	rotal	:	72.4	7	75.5	5	87.5	5	787	7
	Dedu	Deductions	:	1	_	-	1		1	ı	1
	Point	Points gained	<u>ښ</u>	72.4	#	75.5	5	87.5	5	7.8.7	7
Remarks and Awards	:	:	:	Highly	hly	Hıghly	hly	3rd Prize. Shorthorn	rize. horn	Highly	hly
				Commenaed,	naea.	Commended.	ended.	Society's Prize.	s Prize.	Comm	Commended.

Continued.	62	Aldenham Woodnut	Nov. 5, 1929.	1,236 Cont 0	0 <del>1</del>	Morn Ryen				13.65 13.4			12.82 13.12	,_	9.50 10.4	1.28   1.24	5.12 4.96		27.0	6-61	10.1	57.0		57.0	J
T Arrensr, 1922)	19	Aldenham Ringlet	Dec. 12, 1922.	1,206	Sept. 25.	Mom Ryan	•		21.9 20.3	10.95 10.15	de la constitución de la constit	9.34 9.24	13.92 14.50	F9·0 9·0	10.0 10.8	1.02 0.94	4.08 3.76	TOTAL THE PROPERTY OF THE PROP	21.1	20.8	7.8	49.7	I	49.7	
ON OR AFTER IS	09	Plas Power Hopeful	May 10, 1923.	1,271	Sept. 28.		14.6 11 9	_		14.8 12.8	4.19 3.67	9.53 9.45	13.72 13.12	0.62  0.47	12.40 9.4	1.41   1.21	-  -  -	THE PERSON NAMED AND POST OF THE PERSON NAMED	27.6	818	10.5	59.0	l	59.9	
HEIFERS (BORN	57	Ruby 4th	Oct. 9, 1922.	1,075	June 24.	∃∬	Morn Even		1	20	3.52 3.30		12.54 12.04	0.58 0.45	1	1.49 1.2	1	7.7	30.5	20 - 6	10.8	69.3	I	69.3	Highly Com- mended, Short- horn Soc.'s Prize
CLASS 3 - DAIRY SHORTHORN HEIFERS (BORN ON OR AFTER 1ST APRUST, 1922) - Continued.	Number		Вот	weight, in lbs.	Last Calved	Days since Calving	the state of the s		:	92		Composition of Solids other than Fat	1		by 20	in 11	Calculation of Points multiply by 4	;	For weight of Milk (lbs.)	Points \ For weight of Eat (lbs. × 20)	For weight of Solids other than Fat $(1hs \times 4)$	Total	tions	Points gained;	18

CLASS 3.—DAIRY SHORTHORN HEIFERS (BORN ON OR AFTER 1ST AUGUST, 1922)-Continued.

l s Briar.	, 1922. 82 16.	Even 17.0	36.0 18.0	2.93 9.59	12.52	10.6	1.72	88.9	20.40	~~			
71 Longhills Buar.	Sept. 26, 1922. 1,182 Aug. 16.	Morn 23.4 23 9	47.3	2.31 9.45	11.76	11.0	2.24	8 96	41.6	15.8	81.4	61.4	
68 Lady Doreen 9th.	Cet. 22, 1922. 1,328 April 25.	17. 	30.3 15.15	4.00 9.32	13.32	12.2	1-41	79.g	င် စ်	1.	∞	œ	2nd Prize. Res. with No. 72 Shorthorn Soc.'s P.
Lady De	Cet. 25 1,3 Apr.	Morn 19-0 19-8	38.8 19.4	4.23 9.09	13.32	16.40	1.76	7.04	34·5 28·6	12.7	87.8	87.8	2nd Res. wit Shorthor
67 Lady Clovelly	May 18, 1923. 1,095 June 18.	Even 11.9 11.8	23.7	3.90 9.16	13.06	9.5	1.08	4·32 8·3	1G &	8.6		+	
67 Lady C'k	May 18 1,0 Jun	Morn 14.6 14.7	29·3 14·65	3.60 9.38	12.98	10.60	1.37	5.48 8.	26.5 19.8		T-79	f·F9	
65 Greattew Princess.	May 21, 1923. 1,151 Sept. 17.	Even 22.5 20.8	43·3 21·65	4.53 8.99	13.52	19.6	1-94	1.76		10	0	I	e and hly ended.
65 Greattew	May 21, 19 1,151 Sept. 17.	Morn 24.4 26.9	51.3 25.65	$\begin{array}{c} 2.47 \\ 9.45 \end{array}$	0.635	12.70	2 44	97.6	47.3 32.3	17.5	97·1 10 0	87.1	Reserve and Highly Commended.
::	::::	: : : :	: :	: ّ: <sup>*</sup> د	: :		in lbs	î' :	т На + : : +	:	: :	ined	:
::				Fat Solids other than Fat	: :	y 20	an Fat,	γ. • :	For weight of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Eat.	:	Fotal Deductions	Points gained	:
::		: ::	: :	other t	Solids lbs	ltiply l	ther th	Jalving	filk (lb: at (lbs.	:	ΗÃ	P	;
: ;		st day nd day	rotal Average	Fat Solids	Total Solids Fat, in lbs	nts mu	olids o	For time since Calving	For weight of Milk (lbs.) For weight of Fat (lbs. > For weight of Solids othe	4)			rds
::	in lib	filk, 14	Total Averag		۰ ht of J	of Poi	ht of S	r time	r weig r weig r weig	(Ibs. $\times$ 4)			d Awa
Number Name	Born Live weight, in lbs.	Weight of Milk, 1st day Weight of Milk, 2nd day		Percentage Composition of	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Eo.	$egin{array}{c} Fo \ Fo \ \end{array}$				Remarks and Awards

CLASS 4. -DALKY SHORTHORN COWS (NOT ELIGIBLE FOR CLASSES 1 OR 2).

						-		
81 Rosaline,	1,247 July 24. 87	Even 23.5 23.1 46.6	3·71 9·23 12·94	0.86	2·15	4·7 52·5 39·2 19·5 15·9	6.	Highly Commended.
Ro Ro	Land	Morn 29.6 28.8 58.4	3.77 9.27 13.04	$\frac{1.10}{22.00}$	2.72 10.88	4.7 52.5 39.2 19.5 115.9	115.9	Comp
80 Ruth 3rd.	$\begin{array}{c} \rm July\ 29,\ 1916. \\ 1,380 \\ \rm Sept\ 26. \\ 23 \end{array}$	Even 24.9 29.5 54.4	4.07 8.85 12.92	$\frac{1.11}{22\cdot2}$	2.4 9.6	59.5 48.2 21.6 20.3	F3	3rd Prize.
Rut	July 2 1, Sep	Morn 29.7 35.0 64.7	4.04 9.32 13.36	1.3	3.0 12.0	59.5 48.2 21.6 129.3	129.3	
77 Spot.	1915 1,592 Sept. 23. 26	Even 28.0 30.6 58.6	5.60 8.74 14.34	1·64 32·8	$\frac{2.57}{10.28}$	ြောက္ မွာ တ	6	2nd Frize, Kes. 10r 1st Frize, Morrison Dairy Shorthorn Trophy, Shorthorn 'Association's Prize Association's Prize
Sp	19 1,5 Sept	Morn 34.8 33.3 68.1	3 98 9.04 13.02	$\begin{array}{c} 1.36 \\ 27.20 \end{array}$	3.09	63.3 60.0 22.6 145.9	145.9	Ist Frize, Trophy, S Associati
75 ross Beauty	2, 1922. 252 4. 1.	Even 26.5 27.6 54.1	4.07 9.63 13.70	1·10 22·0	2.61	1108 41	7	, Kes. 10r northorn on's Prize
75 Stokeleyeross Beauty	March 2, 1922. 1,252 Oct. 1. 18	Morn 33.4 33.6 67.0	3.84 9.70 13.54	1.29 25.80	3·25 13·00	60.5 47.8 23.4 131.7	131-7	znd Frize Dairy SP Associatic
::	::::	::::	· · · · · · · · · · · · · · · · · · ·	`: : ·	. lbs.	Fat::::		13
::	::::	:::	 m Fat 	20	ı Fat, ir 4	< 20) sr than	Deductions Points gained	:
::	::::	:::	 er the ds	 ly by	r thar dy by	(lbs. × s other Total	Poir	÷
::	::::	day day	Test Solids other than Fat Total Solids	t, in lbs s multi <u>r</u>	ids othe s multig	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. × 4)  Total		: <u>s</u> z
::	n lbs.  lving	lk, 1st Ik, 2nd Total	$\begin{cases} \text{Fat} \\ \text{Of} \\ \text{Solids o} \\ \text{Total S} \end{cases}$	of Fa Point	of Sol Point	or time sin or weight or or weight or or weight or (lbs. × 4)		Award
::	ght, in ved ce Cal	of Mill	a a	reight on of	reight on of	For y For y For y For y		pus ,
Number Name	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day	Percentage Composition the Milk.	Actual weight of Fat, in lbs Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	Points		Remarks and Awards

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90 Martha.	1,414 Sept. 4. 45	Even 22.5 23.5 46.0 23.0	5·19 9·07 14·26	2.3.8 2.08 8.32	0 5 3.6 0.4 4.1 4.1	Reserve and Highly Commended.
9 Mar	1,4 Sep	Morn 32.1 29.1 61.2 30.6	4.34 9.20 13.54	1.33 26.60 2.82 11.28	0 5 53.6 50.4 19.6 124.1	Reserve and Highly Commended
84 Fanny.	1921. 1,256 Sept 28. 21	Even 18.9 19.2 38.1 19.05	3.88 9.64 13.52	0.74 14.8 1.84 7.36	1 1 1	
84 Fann	1921. 1,256 Sept 28	Morn 20.6 20.7 41.3 20.65	3.19 9.67 12.86	0.66 13.20 2.00 8.00	39.7 28.0 28.0 15.4 83.1	
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: :	::::	day day 	Fat Solids other than Fat Total Solids	t, in lbs. s multip ids othe s multip	For time since Calving  For weight of Mulk (1bs.)  For weight of Fat (1bs. × 20)  For weight of Solids other than Fat (1bs. × 4)  Total  Deductions  Points gained	αί :
::	lbs.	lk, 1st day lk, 2nd day Total Average	of So	of Fal Points of Sol Points	time since weight of weight of weight of weight of (lbs. $\times 4$ )	Award
Number Name	Born Live weight, in Ibs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average	Percentage Composition of the Milk.	Actual weight of Fat, in lbs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	For ti For w Points   For w (4)	Remarks and Awards

CLASS 3)														
Nor Eligible for Class 3).	103 Fath	Jan. 30, 1923. 1,036 Aug. 1. 79	Even 15·0 14·9	29-9 14-95	3.86 9.36	13.22	11.6	1.4	- 1	23.3 25.0 25.0	12.6	74.8	74.8	2nd Prize.
Nor Eu		Jan. 5	Morn 17.7 19.1	36.8	3.66 9.48	13.14	13.40	1.74	06.0		ä	7.	FL .	2nd
ļ	96 Watercrook Ruby.	1,098 Sept. 25. 24	Even 18.0 20.5	38·5 19·25	4.49 8.93	13.42	17.2	1.72	6.88	124	ŭ	9	9	lst Prize,
Averst	Waterer	1,0 Sept	Morn 23.8 23.2	47.0	4·10 9·16	13·26 0·96	19.20	2.15	8.60	42.7	15.5	9.46	94.6	1st E
TER 1ST	ard Srd	3, 1922.	Even 11.8 10.8	22.6 11.3	3.79 9.69	13.48	8.6	1.09	4.36	10-	~			
ON OR AF	94 Cowshp 3rd	Sept. 18, 1922. 1,268 Sept. 30. 19	Morn 12.4 13.0	25·4 12·7	3.36 9.66	$\frac{13.02}{0.425}$	8.500	1.23	4.92	$\frac{24.0}{17.1}$	9.3	50.4	50.4	
RN C		- ::: :::	" <del>-</del> :	1: :	1 1	<del>.".</del>	┶.;	-	:	<del></del>		<del></del>		' <del>:</del> -
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ERS (Bo	: :	::::	::	: :		: :	y 20	on Fat, in lbs	:	F	ner tnan Fat 	ä	ints gained.	÷
HEIFERS (Bo	: :	• • • •		: :		: :	tiply by 20	her than Fat, in lbs	:	F	onds other than Fat	Total Deductions	7	:
HORN HEIFERS (Bo	::		: :	: :		: :	its multiply by 20	olids other than Fat, in lbs	:	F	of of solids other than Fat $\times 4$ )	ä	Points gained.	:
HORTHORN HEIFERS (Bo	: :		: :	: :	of Solids other than Fat	: :	of Points multiply by 20	th of Solids other than Fat, in lbs	:	F	or weight of Solids other than frat (1bs. $\times 4$ )	ä	Points gained.	:
RY SHORTHORN HEIFERS (Bo	::		: :	: :	of Solids other than Fat	: :	ulation of Points multiply by 20	nal weight of Solids other than Fat, in lbs	:	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)	For weight of Solids other than flat $(1bs. \times 4)$	ä	Points gained.	:
DAIRY SHORTHORN HEIFERS (Bo	: :		. day day	: :	of Solids other than Fat	: :	by 20	Actual weight of Solids other than Fat, in lbs.	y 4	F	For weight of Solids other than frat (1bs. $\times$ 4)	ä	Points gained.	÷
CLASS 5,-DAIRY SHORTHORN HEIFERS (Born on or after 18t Augest, 1922	::		: :	: :	of Solids other than Fat	: :	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	:	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)	For weight of Solids other than flat (1bs. $\times$ 4)	ä	Points gained.	:

CLASS 6.—LINCOLNSHIRE RED SHORTHORN COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK OF THE LINCOLNSHIRE RED SHORTHORN ASSOCIATION).

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-	108 Scothern Mystic.	May 26, 1918. 1,549 Aug 3. 77	Even 24.6 25.6 50.2 25.1	3.97 9.11 13.08 1.0	20.0 2.28 9.12	3.7 54.5 37.6 19.8	0.0	Highly Commended.
***	Scother	May 2 1, Au	Morn 31.1 27.8 58.9 29.45	3.00 9.11 12.11 0.88	17.60 2 68 10.72	37 37 19	115.6	Hi
-	107 Hempy 6th.	st, 1920. 229 ot. 27.	Even 30.0 31.7 61.7	4·36 8·96 13·32 1-34	26.8 2.76 11.04	0.4 70	α ι α	rize.
	107 Burton Hempy 6th.	August, 1920. 1,229 Sept. 27. 22	Morn 38·0 36·2 74·2 37·1	3.57 9.07 12.64 1.33	26.60 3.36 13.44	67.9	145·8 — 145·8	2nd Prize.
The state of the same of the same		, 1920. 32 28. 1	Even 25·1 22·8 47·9 23·95	6.03 8.77 14.80 1.44	28.8 2.1 8.4		2 1 50	e and nly anded.
-	106 Burton Ethel 8th.	Aug 22, 1920. 1,332 Sept. 28. 21	Morn 32.2 27.7 69.9 29.95	3.42 9.10 12.52 1.03	20.60 2:72 10:88	53.9 49.4 19.3	122.6	Reserve and Highly Commended.
-	4 my 7th.	t, 1916. 19 16.	Even 31.6 33.1 64.7 32.35	4·19 8·75 12·94 1·35	27.0 2.82 11.28	O & 0	6	rize.
THE RESIDENCE AND PARTY AN	104 Burton Amy 7th.	March 14, 1916. 1,449 Sept. 16, 33	Morn 38·5 38·9 77·4	3.44 8.90 12.34 1.34	26.80 3.45 13.80	71.0 53.8 53.8 25.1	149.9	lst Prize.
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-	::	::::	ay 	Fat Solids other than Fat Total Solids Fat, in 1bs	nultipl s other nultipl	ee Calvat Milk of Fat (Solids		:
	: :	ing	k, 1st day k, 2nd day Total Average	Fat  Solids of Total S  Fat, in 1	oints r f Solids oints r	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. × 4)		wards
	: :	ht, in ed e Calv	f Milk, F Milk, To	tage ion of ilk.	m of L sight o m of E	For tin For we For we (1bs.		and A
Management of the State of the	Number . Name .	Born Live weight, in Ibs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average	Percentage Frat Composition of Solids other the Milk. Total Solids Actual weight of Fat, in 1bs	Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in 1bs. Calculation of Points multiply by 4	Points []		Remarks and Awards

4	113	Langford Castle 5th. Langford Norman 7th	Sept. 29, 1921.	1,084	Sept. 7.	42	n	31.0 26.4	THE RESERVE		30.65 25.25		9.34 9.13	12.86  13.68	1.08 1.15	21.60 23.0	2.87  2.31	11.48 9.24	0.2	55.9	44.6	20.7	121.4	to the contract of the contrac	121.4	Highly Commended.
WS-Continued.	111	Langford Castle 5th.	Sept. 23, 1920.	1,319	Sept. 29.	20	ä	33.1 29.1	1		33.25 28.05	4.33 4.22	9.15 9.20	13.48 13.42	1.44 1.19	28.80 23.8	3.05 2.58	12.20 10.32		61.3	52.6	22.5	136.4		136.4	3rd Prize.
SHORTHORN COWS-Continued.	110	Scothern Betty 3rd	May 5, 1919.	1,479	Sept. 26.	23	[ d			45.3 35.9	22.65 17.95	2.80 2.73	9.62   9.71	12.42 12.44	0.64  0.49	12.80 9.8	2.18 1.74	8.72 6.96		40.6	22.6	15.7	78.9	0.00	58.9	
RED	109	Scothern Merrymaid	June 3, 1918.	1,559	July 25.	86	Morn Even	23.9 19.8		47.1 40.6	23.55 20.3	3.35 4.44	9.49 9.08	12.84 13.52	0.79 0.9	15.80 18.0	2.24   1.84		4.6	43.8	33.8	16.3	98.5	· ·	98•5	,
CLASS 6.—LINCOLNSHIRE	Number		Rom	weight in the		Jalving		Weight of Milk, 1st day	Weight of Milk, 2nd day	Total	Average	Donoontogo (Hat	Composition of Solids other than Fat		Actual weight of Fat. in lbs	by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4		For weight of Milk (lbs.)	< 20)	For weight of Solids other than that		80	Points gained	Remarks and Awards

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COWS—Continued.
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CLASS 6.—LINCOLNSHIRE
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117 Flamville Danymard 120th	Dec. 10, 1917.  1,272 Sept. 10 39 30 Morn Even 23.4 19.8 23.4 4.05 22.85 20.8 22.85 20.8 4.07 4.06 22.85 20.8 4.07 4.06 22.85 20.8 4.07 4.06 22.85 4.07 4.07 4.07 4.07 4.07 4.07 4.07 4.07	
I Llamville	Dec. 10, 1,27, Sept. 39 Morn 22.3 23.4 46.7 46.7 228.85 9.04 13.06 0.92 18.40	
115 Langford Queen 7th.	Jan. 25, 1918.  1,253 Sept. 18. 31 Morn Byen 77.5 S. 25.9 4.3 51.7 77.15 25.85 3.65 5.70 8.79 8.79 8.79 8.79 8.79 8.79 8.79 8.79	Highly mmended.
115 Langford Qu	Jan. 25, 191 1,263 Sept. 18. 31 Morn Fve 27.5 25.8 25.4 27.15 25.7 3.65 5.8 8.79 8.79 8.79 8.79 19.80 29.40 2.40 2.99 1.960 9.4 18.6 121.0	Highly Commended.
4 Ada 5th	1917. 30 26. Even Even 27.0 53.5 26.75 26.75 3.42 8.62 12.04 0.92 18.4 2.31 9.24 18.4 2.31 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6	hly ended.
114 Bendish Ada 5th	Dec. 7, 1917. 1,330 Aug. 26. 54 Morn Even 32.3 2.7-0 65.5 53.5 32.75 26.75 32.75 26.75 2.32 3.42 8.80 8.62 11.12 12.04 0.76 0.92 11.52 9.24 15.20 18.4 2.88 2.31 11.52 9.24 2.88 2.31 11.52 9.24 11.52 9.24 11.52 9.24	Highly Commended.
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::	in in bs	d Awards
Number Name	Live weight, in lbs.  Last Calved	Remarks and Awards

Class 7.—LINCOLNSHIRE RED SHORTHORN HEIFERN (Entered in or Eligible for the Head Book of the Linggleshire Red Shorthorn Association. Born on or after 1st August, 1922).

		_			
124 Burton Royal Scathght 12th	Dec. 26, 1922. 1,226 Sept. 30, 19	n Even 20.3 20.4 40.7 20.35 4.81		94 6-72 45-9 39-6 16-4 100-9 20-0 80-9	3rd Prize.
E S	Dec.	Morn 26.0 25.2 51.2 25.6 3.91 8 45	12.36 1.00 20.00 2.16	408 100 100 100 100 100 100 100 100 100 1	3r
123 Burton Vic 19th.	Aug. 29, 1922. 1,347 Sept. 23. 26	Even 16.0 13.6 29.6 14.8 4.66	13.70 0.69 13.8 1.34	5.36 5.0 5.7 5.7	Highly Commended.
	Aug. 29, 19 1,347 Sept. 23, 26	Morn 17.4 14.0 31.4 15.7 3.58 9.28	12.86 0.56 11.20 1.46	30.5 30.5 25.0 11.2 66.7	Hig
2 olly 1 Fth.	3, 1922. 36 . 2.	Even 22:3 21:6 43:9 21 95 5:43 8:93	14.36 1.19 23.8 1.96	7.84	rize.
122 Langford Polly 1.8th.	Sept. 26, 1922. 1,066 Oct. 2. 17	Morn 24.8 25.2 50.0 25.0 4.00	13-46 1-00 20-00 2:365	9.46 46.9 43.8 17.3 108.0	lst Prize.
0 ave 4th	, 1922. 8 26.	Even 15.7 15.0 30.7 15.35 4.65	13.82 0.71 14.2 1.40	ည်	ıly nded.
120 Langford Cave 4th	Sept. 29, 1922. 1,148 Sept. 26. 23	Morn 18:6 18:0 36:6 3:94	13.02 0.72 14.40 1.66	33.6 28.6 28.6 12.2 74.4	Highly Commended.
::	1 1 1 1	:::::		Fat::::-	
::	::::	: : : : ;	n rat  20 Fat, in	on of Points multiply by 4  For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. × 4)  Total  Deductions  Points gained	÷
::	::::	:::::	Solids other than rate. Total Solids Fat, in Ibs ints multiply by 20 Solids other than Fat, i	on of Points multiply by 4  For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lhs. × 20)  For weight of Solids other that (lbs. × 4)  Total  Deductio	:
::	::::	st day and day and rage	Souds otner Total Solids Fat, in Ibs nts multiply	nce Ca of Mill of Fat of Soli	<b>:</b> .
::	n lbs.	lk, 1st day lk, 2nd day Total Average	of Soli	on of Points multiply by For time since Calving For weight of Milk (lbs.) For weight of Fat (lbs. > For weight of Solids othe (lbs. × 4) Tota Ded	Award
	 sight, i lved	eight of Milleight	nposition the Milk. tual weight culation of	Hon of For For For (IL)	s and
Number Name	Born  Live weight, in lbs.  Last Calved  Days since (alvino	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average Percentage \( \int \text{Fat} \)	Composition of Solids other than rate the Milk. Trotal Solids Actual weight of Fat, in Ibs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in Ibs.	Calculation of Points multiply by 4  [For time since Calving For weight of Milk (lbs.)  Points   For weight of Fat (lbs. × For weight of Solids other (lbs. × 4) Total Deduc	Remarks and Awards
1					

CLASS 7.-LINCOLNSHIRE RED SHORTHORN HEIFERS (Born on or after 1st August, 1922)-Continued.

4			NEW YEAR AREA
126 Burton Hentpy 9th.	March 21, 1923. 1,052 Sept. 21. 28	Monm 24-0 22-0 46-0 23-0 12-36 9-20 0-728 1-14-50 0-728 1-14-50 1-14-50 9-9 9-9 9-9 9-9 9-9 9-9 9-9 9-9 9-9 9-	2nd Prize.
		than Fat by 20 by 4 by 4 by 4 by 4 chy 4 by 4 by 6 cher than Fat Total Total Deductions	:
	1111	1st day	:
Number	Born Idve weight, in lbs Last Calved Daves eines Calved	Weight of Milk, 1st day	Remarks and Awards

CLASS 8,—BRITISH FRIESIAN COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. BORN ON OR PREVIOUS TO 1ST AUGUST. 1920).

	т					1	_				<u>ت</u>	<u> </u>	÷1	20	5													
	9 Ge-u	ping.	9161	05	Sept. 24.	ją.	Even	55.0	22.3	44.9	22.45	3.54	8.95	12.46	0.79	15.8	0.3	8.0	, ,	49.6	35.8	c	2.7	ŏī	1	2		
-	136 Knelyonth Cesa s	Kose	Jan. 10, 1919.	1,4	Sept	21	Morn	27.5	8.92	54.3	27.15	3.13	60.6	12.22	0.85	17.00	2.46	78·6		49	63 63	Ī	77	100.2		100 2		
	134	жанден гена.	Oct. 17, 1917.	1,308	Sept. 11.	38	Even	32.0	$31 \cdot 1$	63.1	31.55	3.98	9.16	13.14	1.26	25.2	2.89	11.56		73.3	51.6	ć	27.0	i51.9		151.9	3rd Prize.	The second secon
".	T a	Walde	Oct. 1	_	Sep		Morn	42.6	40.8	83.4	41.7	3.17	9.29	12.46	1.32	26.40	3.87	15.48		7	70		77	15	,	15	3rd	
JST, 1920	~	Nancy	1917.	<b>#</b>	2,	7	Even	31.0	30.3	61.3	30-65	4.64	8.74	13.38	1.42	28.4	2.68	10.72		ŭ	0		o o	4	o O	4	hly mded.	
ST AUG	133	Eastern Nancy	Sept. 5, 1917.	1,534	Oct 2.	17	Morn	35.8	37.9	73.7	36.85	2.92	8.90	11.82	1.08	21.60	3.29	13.16		67.5	50	,	23.9	141.4	10	131-4	Highly	
OUS TO	,	ch 13th.	1917.	23	20.		Even	27.0	25.1	52.1	26.05	4.03	9.53	13.56	1.05	21.0	2 48	9.92	Andrews of the Party of the Par		••				_			-
BORN ON OR PREVIOUS TO IST AUGUST, 1920)	131	Telling Torch 13th.	Nov. 25, 1917.	1,462	Sept. 20.	29	Morn	29.3	31.3	9.09	30-3	2.90	9.42	12.32	0.88	17 60	2.86	11-44	Total Statement of the Party of	56.3	38.		21.4	116.3	10.0	106.3		
O.	:	:	:	:	:	:		:	:	:	:	4	:	:	:	:	lbs.	:	:	:	÷	Fat	:	:	:	d	<u>:</u>	_
BORN	:	i	:	:	:	:		:	:	:	:	:	n Fat	÷	:	20	Actual weight of Solids other than Fat, in lbs.		:	:	( 50)	r than I	:		Deductions	Points gained	÷	
	:	:	:	:	:	:		:	:	:	:	:	er tha	ds	:	ly by	r than	ly by	ing	(lbs.)	Tbs.	s othe	:	Total	Ded	Poin	:	
	:	:	:	:	:	:		dav	l day	. :	ge	Fat	Solids other than Fat	Total Souids	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	lids othe	Calculation of Points multiply by	For time since Calving	of Milk	For weight of Fat (lbs. $\times$ 20)	of Solid	: ::				:: sı	
	:	፥	:	n ib:	:	lving		k. 1st	k, 2nd	Total	Average	1	~	_	of Fa	Point	os jo	Point	time s	weight	weight	weight	X				Award	
	:	:	:	ight, i	lved	nce Ca		of Mil	of Mil			ntage	ition	filk.	weight	ion of	weight	ion of	For 1	For	For,	For	e _				s and	
	Number	Name	Born	Live we	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day			Percentage	Composition of	the Milk.	Actual	Calculat	Actual	Calculat			Points <						Remarks and Awards	
	1																											

CLASS 8,—BRITISH FRIESIAN COWS (Born on PRATICES TO IST AUGUST, 1920)—(Continued.	OWS (Bo	RN ON O	R PRFVI	rs ro l	ST AUGUST	1920)	-Continue	d.
Number	. 137		138	œ	139		140	0
Name	Haydon Pax	Pax	Glen Cameo	атео	Felhampton Susan	Susan	Penshuist Hyacinth.	Hyacinth.
Born	June 27, 1919.	1919.	March 31, 1918.	1, 1918.	Oct 3, 1915.	1915.	April 21, 1917	1, 1917
weight, in lbs.	1,360	0	1,341	41	1,417	7	1,618	818
:	Aug. 28.	.83	Sept. 28.	. 38.	Aug. 5.	ıç.	Sept. 14.	f. 14.
Days since Calving	20	:			C/	10 10 10 10 10 10 10 10 10 10 10 10 10 1		:
	Morn	Even	Morn	Even	Morn	Even	Morn	Even
Weight of Milk, 1st day	39.3	28.8	23.4	21.7		33.3	37.8	6-62
:	. 33 9	34.1	25.1	21.7		36.8	38.0	20.8
Total	73.2	65.0	48.5	13.1	82.1	70.1	75.8	59.7
	36.6	31.45	24.25	21.7	41.05	35-05	37.9	29.85
•	16.4	4.92	4.39	5.73	3.55	3.69	2 63	3 33
if \ Solids other than Fat	8.95	8.92	9:02	9.25	9.23	8.95	8 59	8 47
	. 13.16	13.84	14.04	14.98	12.78	12.64	11.22	11.80
Actual weight of Eat, in Ibs	1.54	1.54	1.06	1.24	1.46	1.29	1.00	0.60
Calculation of Points multiply by 20	30.80	30.8	21.20	24.8	29.50	25.8	20 00	19.8
Actual weight of Solids other than Fat, in lbs.	3.28	2.8	2.34	2.0	3.8	3.13	3.25	2.52
Calculation of Points multiply by 4	. 13.12	11.2	9:36	8.0	15.2	12.52	13 00	10.08
Teor time since Calving	1.2	Transportation of the latest o			35			n-cotts_cremeroocentero
For weight of Milk (lbs)	. 68 0		45.9	6	76.1		7.79	7
Points \ For weight of Fat (lbs. × 20)	9 19		46 0		55.0		39.8	oc
For weight of Solids other than l'at $(1h^{\alpha} \times 4)$	54.3		17.4		27.7		23 1	
Total	155.1		109.3	3	162.3		130.6	9
Deductions				1			50.0	0
Points gained	155.1		109.3	~	162-3		110.6	9
Remarks and Awards	2nd Frize.	ize.			1st Prize, Spencer ('up. Reserve Gold Medal, Reserve Barham ('up. Reserve Shirley ('up.	acer Cup. d Medal, nam Cup. ley Cup	Highly Commended	hly ended.

CLASS 8.—BRITISH FRIESTAN COWS (BORN ON OR PREVIOUS TO 1ST AUGUST, 1920)—Continued.		F
BRITISH FRIESIAN COWS (Born on or pre-	ust, $1920)$ —Co	
BRITISH FRIESIAN COWS (Born on or pre-	lsr	
BRITISH FRIESTAN COWS	R PREVIOUS TO	
BRITISH FRIESTAN COWS	ONO	
BRITIS	(BORN (	
BRITIS	COWS	
BRITIS	Z	
BRITIS	FRIESL	
	BRITIS	

					Annual Control of the	
148 Hamels Beryl	Nov. 18, 1919. 1,376 Sept. 29. 20	Even 30·1 29·8 59·9 29·95	4·74 8·94 13·68	1.42 28.4 2.68 10.72	67-8 59-4 24-5 151-7	Reserve.
Hame	Nov. 1, Ser	Morn 38.7 36.9 75.6 37.8	$4.11 \\ 9.11 \\ 13.22$	1.55 31.00 3.44 13.76	6 5 1 15 15	Re
) Princess aght	10, 1918. 1,278 ug. 3.	Even 19 5 24.3 43 8 21 9	3 01 8 15 11·16	0 66 13•2 1 78 7 12	6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	lified.
145 Brooklands Princess Flashinght	Nov. 10, 1918. 1,278 Aug. 3. 77	Morn 29 2 25 4 25 4 54.6	2 82 8 30 11.12	0 77 15-40 2 27 9 08	3.7 4.9 2 28.6 16 2 97 7 67 7	Disqualified.
oublesome	1919. 4 . 9.	Even 27.6 29.8 57.4	3·48 8·76 12·24	1 0 20.0 2.51 10.04	. # 60   1   2	nly mded.
142 Muntham Troublesome	June 12, 1919. 1,334 Sept. 9. 40	Morn 29.9 27 6 57.5 28.75	3·86 8·78 12·64	1.11 22.20 2.52 10.08	57.4 42.2 20.1 119.7	Highly Commended.
Ī	1916.   7 20.	Even 20·0 23·9 43·9 21·95	4 39 8.29 12.68	0.96 19.2 1.82 7.28		magness and the following the
141 Beccles (floria,	Cet. 24, 1916. 1,527 July 20. 91	Morro 23.8 28.8 52.6 26.3	4-25 8-21 12-46	1·12 22·40 2·16 8·64	5-1 48-2 41-6 115 9 110-8 20-0 90 8	
<u> </u>	::::		: : :	lbs.	Fat	:
::	::::	::::	 an Fa	 O Fat, in	ng  Na. × 20)  other than Fat  Total  Deductions  Points gained	÷
: :	::::	::::	 her th lids	 y by 2 than ] y by 4	ing ibs., bs. × 20) other tha Total Deduction Points ga	:
: :	: : : :	, <u> </u>	Fat Solids other than Fat Total Solids	Actual weight of Fat, in lbs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	For time since Calving	:
: :	sq . bu	Weight of Milk, 1st day Weight of Milk, 2nd day Total	Fat Solid Tota	Fat, i	or time since Cor weight of Mor weight of Elor weight of Elor weight of So (lbs. × 4)	/ards
	f. in I I Calvi	Milk, Milk, To Av	ge n of	ght of of Pe ght of of Pe	or tim or wei or wei or wei (1bs.	ıd Aw
ber	Born Live weight, in 1bs Last Calved Days since Calving	nt of ] nt of ]	Percentage omposition the Milk.	l weig lation l weig lation	سنتهت	rks aı
Number Name	Born Live v Last ( Days	, Weigł Weigł	Percentage Composition of the Milk.	Actua Calcul Actua Calcul	Points	Remarks and Awards
						,

-Continued.																										
r August, 1920)—	Golf Polyne		July 17, 1919.	1.987	Sent 13	36	Mom Pron	=	34.7 58.9	-	35.45 29.35	3.31 3.67		12.74 12.74	1.17 1.07	23.40 21.4	3.34 2.65	13.36 10.60		64.8	0.44	24.0	133.6		133.6	Highly Commended.
R PREVIOUS TO 18	Ter	Burkeley Heam of Troy	Dec. 30, 1918.	1.262	Sent. 30.	119	Monn Duran			1	100	3.94 3.76		12.86   12.64	1.45 1.14	29.00 22.8	3.27 2.69	13.08 10.76		0.70	0.10	23.8	142 6		142.6	Highly Commended.
8.—BRITISH FRIESIAN COWS (Born on or previous to 1st August, 1920)—Continued.	::		Por	micht in Iha	son m'	Dava since Calving	:		Weight of Mills, 186 day	:	Average	Percentage (Rat	Composition of Solids other than Fat		Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For time since Calving		Fourts $\langle$ For weight of Fat (108. $\times$ 20) For weight of Solids other than Fat	(1bs, × 4)	Total	Deductions	Points gained	Remarks and Awards

CLASS 9.—BRITISH FRIESIAN COWS (ENTERED IN OR ELIGIBLE FOR THE HIRD BOOK. BORN AFTER 1st AUGUST, 1920, AND PREVIOUS TO IST AUGUST, 1922).

162 Hache Akkau Vutuc	Jan. 28, 1921. 1,602 Aug. 5. 75	Even 25·3 21·9 47·2 23·6	5.63 8.01 13.64 1.32	26.4 1.89 7.56	3.5 48.1 42.6 115.8 20.0 90.0	
16 Hache Ak	Jan. 28 1,6 Au 7,7	Morn 21.9 27.2 49.1 24.55	3.29 8.39 11.68 0.81	16.20 2.06 8.24	48 48 42 42 110 110 110	
160 Land Juliet.	June 30, 1922. 1,378 Sept. 18. 31	Even 24.7 25.7 50.4 25.2	3.46 8.78 12.24 0.87	17.4 2.21 8.84	56.4 38.6 19.5 1114.5	Highly Commended.
)( Lund	June 3 1,3 Sept	Morn 32.0 30.4 62.4 31.2	3.41 8.53 11.94 1.06	21.20 2.66 10.64	38 38	Hiy
) up 1922) e 23nd	5, 1921. 97 25. 4	Even 24.0 27.2 51.3	5·19 8·73 13·92 1·32	26.4 2.23 8.92	୍ଷ୍ଷ ୨୦୦୦	rize.
159 Land (Imp 1922) Blanche 22nd	April 26, 1921. 1,497 Sept. 25. 24	Morn 24.2 33.0 57.2	6.40 9.34 15.74 1.84	36.80 2.67 10.68	54.2 63.2 19.6 137.0	1st Prize.
3 10ens 31d	. 1921. 32 23.	Even 32 9 32 2 65·1 32 55	2 63 8 59 11.22 0.85	17 0 2 8 11 2	1.1 8 8 8 8 9 7 7 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	lified.
Reddown Chorus and	Aug. 14, 1921. 1,432 Sept. 23. 26	Morn 47 5 39·6 87·1 43·55	2 38 8 32 10 70 1 04	20 80 3 63 14 52	76·1 37 8 25·7 139 6 30·0	Disqualified.
::	::::		1 :: : : :	lbs.	Fat	***************************************
::	::::	::::	in Fat	20 1 Fat, in 4	20) .than ctions	:
::	::::	::::	er thr ds	dy by r than dy by	ring (1bs.) (1bs. ; ls oth Tot: Ded	:
::	::::	day day 	Fat Solids other than Fat Total Solids Fat, in Ibs	s multip ids othe s multip	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than (lbs. × 4)  Total  Deductions  Points gain	: sı
::	a Ibs.	lk, 1st day lk, 2nd day Total Average	~ =	Point of Sol Point	or time since C or weight of M or weight of Fi or weight of Si (lbs. × 4)	Awarc
::	ght, in ved	of Mill	tage tion of ilk.	on of eight on of	For t For v For v For v	and
Number Name	Born I.ivo weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average	Percentage  Composition of Solids other ti the Milk. Total Solids  Actual weight of Fat Ibs	Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in Ibs. Calculation of Points multiply by 4	Points	Remarks and Awards

—Continue.1																			,								
sr August, 1922	171 Wmchester Musk.	, ,	Dec. 20, 1920	1,334	Sept. 29.	90	Morn Even		37.6 36.0		38.75 35.55	2.32 3.67	8.70 8.77	11.02 12.44	0.90 1.3	18.0 26.0	3.36 31	13 44 12.4		74.3	44.0	9.5.8	1.11.1	10.0	134.1	The second secon	3rd Prize.
AND PREVIOUS TO L	164 Thursten Karels Emily		Dec. 5, 1920.	1,586	June 17.	124	Morn Byen				33.65 25.5	3.43 4.78	8.55 8.62	11.98 13.40	1.15 1.22	23.0 24.4	2.86 2.2	11-44 8-8	8.4	59.1	47.4	6.06	133.1	, i	135.1	, in the second	2nd Prize.
sr Augusr, 1920,	163 Hache Verper		Nov 13, 1921.	1,456	Sept. 4.	45	Morn Even		30.5 30.7	61.1 61.2	30-55 30-6	2.73 4.50		11.56 13.62	0.84 $1.38$	16.80 27.6	2.72 2.79	10.88 11.16	05	1.19	₹ <b>-</b> ₹-	25.0	198.0	10.0	118.0	Reserve and	Highly Commended.
CLASS 9.—BRITISH FRIESIAN COWS (Born after 1st August, 1920, and previous to 1st August, 1922)—Continued	Number	í	Born	Live weight, in lbs	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day	Total	Average	Percentage (Fat	Composition of Solids other than Fat	the Milk. (Total Solids	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Calculation of Points multiply by 4	(For time since Calving		Points $\langle \text{For weight of Fat (lbs.} \times 20) \rangle$	(lbs. × 4)	Total	Deductions	Points gained		Kemarks and Awards

Joible for the Head Book.	
-5	1922).
-BRITISH FRIESIAN HEIFERS (ENTERED IN OR I	BORN ON OR AFTER 1ST AUGUST, 1
CLASS 10-BRITISH	

TOWN ON THE	TOTAL	.( ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Number	177	182	185
Name	Haydon Bountiful and	Hamels Eleanor.	Holf Donn 2nd
Born	Dec	Sept. 27, 1922.	Oct. 11, 1922.
Live weight, in lbs	1,396	1,324	1,392
Last Calved	Sep	May 9.	Sept. 17.
Days since Calving	30	163	35
	Morn Even	Morn Even	
Weight of Milk, 1st day			
Weight of Milk, 2nd day			
Total	32.6 27.2	44.7 36.4	52.0 41.1
Average	16.3 13.6	22-35 18-2	26 0 20-55
Percentage (Fat	4.83 3.66	3.82 3.89	3.41 4.23
of \ Solids other than ]	8.91 9.04	8 70 8.51	
the Milk. (Total Solids	. 13.74 12.70	12.52 12·40	12.84 14.08
Actual weight of Fat, in lbs	0.79 0.5	0.855 0.71	0.885 0.87
Calculation of Points multiply by 20	15.80 10.0	17.10 14.2	17.70 17.4
Actual weight of Solids other than Fat, in Ibs	1.46 1.23	1.94   1.55	2.46   2.02
Calculation of Points multiply by 4	5.84 49.2	7.76 6.2	9 84 8 08
(For time since Calving		12.0	The control of the co
For weight of Milk (lbs.)		40.5	46.5
Points \ For weight of Fat (lbs. × 20)	25.8	313	35.1
For weight of Solids other than Fat		975	0.5
:		0.71	6.11
Total Deductions	6.93	87.8	9 66
Points gained	66.5	97.8	99.5
Remarks and Awards	-	2nd Prize.	1st Prize.

CLASS, 11.—SOUTH DEVON COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK OF THE SOUTH DEVON HERD BOOK SOUTETY).

189 drop 2nd.	June 22, 1919. 1,632 Sept. 16.	Even 32 2 22.6 54 8 27.4	5.82 9.48 15.30	1.60 32.0 2.60 10.40	0 257	7	1st Prize, South Devon- Silver Cup, S. Devon- Herd Book Society's Prize.
189 Snowdiop 2nd.	June 22, 19 1,632 Sept. 16.	Morn 30-7 35-5 66-2 33-1	4-57 9-55 14-12	30.2 3.16 12.64	60.5 62.2 23.0	145.7	Ist Prize, Sout Silver Cup, S Herd Book S Prize.
187 Milkmard 9th	Sept. 2, 1916. 1,610 April 13 189	Even 12.6 11.0 23.6 11.8	8.20 8.84 17.04	0.97 19.4 1.04 4.16	2.0 6.1 6.6 9.5	ध । ध	COLUMN TO THE PROPERTY OF THE
Milkm		Morn 16.7 11.8 28.5 14.25	6.03 9.45 15.48	0.86 17.2 1.34 5.36	12.0 26.1 36.6 9.5	84.2	
: :		::::	: : :	 n Ibs.	 Fat	 led	:
::	::::	::::	Solids other than Fat Total Solids	, 20 n Fat, ii , 4	) × 20) er than	Total Deductions Points gained	:
::	::::	::::	 ner th ids	s ply by er tha ply by	ving t (lbs. (lbs. ls oth	Tot Dec Poi	÷
::	::::	ay lay 	Fat Solids other Total Solids	in Ib multi Is oth multi	ce Cal of Mill of Fat f Solid		:
::	in lbs.	Weight of Milk, 1st day Weight of Milk, 2nd day Total	of Solids o	Actual weight of Fat, in Ibs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in Ibs. Calculation of Points multiply by 4	For time since Calving For weight of Milk (lbs.) For weight of Fat (lbs. × 20) Flow weight of Solids other than Fat (lbs. × 4) Fat	•	Remarks and Awards
::	ight, lved nce Ca	of Mii of Mii	Percentage mposition of the Milk	weigh tion of weight tion of	For For (II)	,	s and
Number Name	Born Live weight, in lbs. Last Calved Days since Calving	Weight Weight	Percentage Composition of the Milk	Actual Calcula Actual Calcula	Points -		Remark
			•				

CLASS 12.—DAIRY SOUTH DEVON COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK OF THE RECORDED DAIRY SOUTH DEVON CATTLE SOCIETY).

196	Luson Cowslip 2nd	FOOL	May, 1921.	1,370	Sept. 13.	36	1	15.0			5 15.0				2 0.65	-		8 5.40		31.9	33.4	7.	e.TT	768	THE THE PERSON NAMED IN COLUMN TWO IS NOT THE	76.8	
	<del></del>							21.1 15.2		42.1 33.7	21.05   16.85	7000	9 07   9 02	14.22 15.08	1.09	21.8 $20.4$		7.68 6.08	The state of the s						-		 
194	Luson Milkmaid.	0 - 1	April, 1914,	1,548	July 27.	84	Morn E				26.8 2	5.20		14.46	1.39	27.8 2	2.48	6-92	4.4	47.9	9.67	ļ	0./.1	119.5	1	119.5	1st Prize.
192	Ferry Lady 2nd.	0101	June 20, 1919.	1,492	June 17.	124	n Even			35.0	. 17.5	3   5.66	7 9.44	0 15.10	3 0.99	19.8	8 1.66	2 - 6.64	8-4	41.1	464	1	8.01	1111.7	1	111.7	2nd Prize.
And desired to the second							Even Morn	20.5 24.3	22.5 22.9	43.0 47.2	21.5 23.6	3.82 5.63	8.92 9.67	12.74 15.30	$0.82 \qquad 1.33$	16.4 26.6	1.92 2.28	7.68 9.12	Mary Mary Mary Mary Mary Mary Mary Mary			<b>B</b> ernand Program					
190	Ramsland Dainty	- 0	Oct 6, 1919.	1,572	July 17.	94	Morn		27.7	53.6 4	26.8 2	4.00		13.02	1.07	21.4 1	2.41	£9.6	5.4	48.3	37.8		17.3	108.8	1	108.8	3rd Prize.
:	:	:	:	:	:	:		:	:	:	:	:	Fat	:	:	:	at, in lbs.	:	:	:	(0	than Fat	:	:	suoi	Points gained	:
÷	:	:	:	:	:	÷		:	:	:	:	:	Solids other than Fat	lids		iply by 20	ier than F	iply by 4	lving	lk (1bs.)	t (Ibs. $\times$ 2	lids other	:	Total	Deductions	Points	÷
:	:	:	:: ::	:	gu	sql		1st day	2nd day	Total	Average	Fat	√ Solids of	Total Solids	f Fat, in Il	oints mult	f Solids oth	oints mult	ne since Ca	ight of Mi	For weight of Fat (lbs. $\times$ 20)	ght of So	(lbs. $\times$ 4)		•		wards
Number	Name	Born	Number of Calves	Last Calved .	Days since Calving	Live weight, in Ibs.		Weight of Milk.	Weight of Milk, 2nd day	To	$A_{\mathbf{V}}$	Percentage	Composition of .	the Milk.	Actual weight of Fat, in lhs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	(For tin	For we	Points \ For we	For we	(lbs.				Remarks and Awards

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 198 Jef Queenie	May, 1921	1,440	Sept 17.	32	1 Even			45.1	22.55	5 4.77	5 9.31	0 14.08	2 1.08	21.6	1 2.11	4 8-14		48.4	42.0	•	17.7	108.1	1	108.1	Reserve & Highly	Commondod
	Me		<i>3</i> 2		Morn	25.3	26.3	51.6	25.8	3.95	8.95	12.90	1.02	20.4	2.31	9.24									R	_
197 Painsford Danymaid 4th	May 15, 1915.	1,374	May 12.	160	Even	17.0	16.3	33.3	16.65	4.85	8.81	13.66	0.81	16.2	1.47	5.88	12.0	37.6	33.5		13.4	96.5	ļ	96.5		
I Painsford	May 1	T,	Ma		Morn	20.2	21.6	41.8	50.9	4.14	9.04	13.18	0.865	17.3	1.89	7.56	I	373	ന		_	6		6		
::	:	:	:	;		:	:		:	:	::	:	:	-	n lbs.	:	:	:	:	Fat	-:	:	:	ned	:	;
::	:	:	:	:		:	:	:	:	:	Solids other than Fat	;	:	7 20	n Fat, i	74	÷	:	× 20)	For weight of Solids other than Fat	:	5al	Deductions	Points gained	:	
 ::	:	:	:	:		:	:	:	:	:	ls other	Total Solids	lbs	ltiply by	ther tha	ltiply by	alving	For weight of Milk (lbs)	For weight of Fat (lbs. $ imes 20$ )	olids oth	:	Total	De	Poj		
: :	:	;	:	:		t day	nd day		Average	Fat	Solid	Tota	at, in	ats mu	olids or	nts mu	since (	ht of M	nt of F	nt of Se	4)				rds	
: :	:	in lbs	:	Calving		filk, 1s	filk, 2r	Total	Aver	<u>ر</u>	y of	ر.	ht of I	of Poin	ht of S	of Poi	For time since Calving	r weigl	r weigl	r weigl	(lbs. $\times$ 4)				d Awa	
Number Name	Born	Live weight, in lbs.	Last ('alved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day	ļ		Percentage	Composition of	the Milk.	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	(Fo	Fo	Points $\langle F_{\odot}$	Fo					Remarks and Awards	

CLASS 13.—DEVON COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK OR ENTERED IN THE SUPPLEMENTAL REGISTER OF SUCH HERD BOOK).

														-							
4, 1920.	t. 6.	3	Even	21.7	43.1	21.55	4.05	9.51	13.56	0.87	17.4	2.05	8.20	- 17	· 9		G.	હો		.2	3rd Prize.
March 1	ìŏ —		Morn	27.3	56.3	28.15	4.85	9 51	14.36	1.36	27.2	2.67	10.68	- 40	44		18	113		113	3rd
6, 1921. 36	27.	2	Even	19.5	38.5	19.25	4.45	9.25	13.70	98.0	17.2	1.79	7.16	10	. 0		-	0	1	0	Reserve and Highly ommended
Sept. 1	Sept	2	Morn	23.6 23.7	47.3	23.65	5.27	9.47	14.74	1.24	8.4.8	2.23	8.92	1.67	4.5		16.	101		101	_
1918.	Ξ.	8	Even	21.4	6.61	20.35	4.15	6.07	13.22	₹8-0	16.8	1.83	7.32		- <del></del>		<del></del>	~		20	hly ended. susk ('up
May 5,	Sept	, es	Morn	25.5 99.6	6.64	24.65	4.21	9.23	13.44	1.03	20.6	2.27	80.6	1 46.1	37.		16.	.86	1	-86	Highly Commended. Reserve Busk ('up
, 1920.	17.		Even	15.8	31.0	15.5	4.84	9.18	14.02	0.75	15.0	1.42	5.68							1	
Sept. 22	Sept.	32	Morn	17.4	35.9	17.95	4.79	9.47	14.26	98-0	17.2	1.70	08.9	7.00	32.2		12.5	78.2	1	78.5	
:	: :	-:	-	:	:	· ·	:	:	-	:	:	lbs.	:	:	: :	at	:	:	:	b	:
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::	in ins.	alving		lk, 1st o	uk, zna Total	Averag	_	$\overline{}$		t of Fat	f Points	t of Soli	f Points	time sin	weignt weight	weight	bs. X 4				l Award
Born	Last Calved	Days since Ca		Weight of Mi	Weignt of Mi		Percentage	Composition	the Milk.	Actual weigh	Calculation of	Actual weight	Calculation of	For	<del></del> ~		: 	•			Remarks and Awards
	Sept. 22, 1920. May 5, 1918. Sept. 16, 1921. Marc	in lbs Sept. 22, 1920. May 5, 1918. Sept. 16, 1921 1,415 1,348 1,235 Sept. 17. Sept. 17. Sept. 11.	Sept. 22, 1920. May 5, 1918. Sept. 16, 1921.  1,415 Sept. 17. Sept. 11. Sept. 27. 32. 38.	Sept. 22, 1920. May 5, 1918. Sept. 16, 1921.  1,415 Sept. 17. Sept. 11. Sept. 27.  32. Morn Even Morn Even Morn Even	Sept. 22, 1920.   May 5, 1918.   Sept. 16, 1921.	Sept. 22, 1920. May 5, 1918. Sept. 16, 1921.  Sept. 17. Sept. 17. Sept. 11. Sept. 18. Sept. 22.  Morn Bven Morn Bven Morn Bven Bven Bven Bven Bven Bven Bven Bve	Sept. 22, 1920. May 5, 1918. Sept. 16, 1921. March 4, 1,235 1,335	$\begin{array}{cccccccccccccccccccccccccccccccccccc$													

CLAS	CLASS 13.—DEVON COWS—Continued.	ON CO	WS—Co	ntinued.			
Number Namé	204 Lady 9th.	j.	205 Janet.	205 met.	206 May	206 May	207 Wynford Dah
Born in Live weight, in Ibs	Sept. 26, 1921. 1,066 Sept. 17. 32	1921.	1918. 1,408 Sept. 14.		1919. 1,354 Sept. 9.	19. 54. 0 9.	Jan. 19, 19, 19, 19, 19, 1,426 April 8, 194
Weight of Milk, 1st day          Weight of Milk, 2nd day          Total          Average	Morn 21.2 1 24.3 2 45.5 3 2 22.75 1	Even 18·3 20·4 38·7 19·35	Morn 28.9 29.5 58.4 29.2	Even 25.7 27.3 53.0	Morn 30.5 33.2 63.7	Even 26.1 26.6 52.7 26.35	Morn         Ev           15·0         14·           18·3         17·           33·3         31·           16·65         15·
Percentage Fat Composition of $\langle Solids other than Fat$ the Milk.   Total Solids	$\begin{array}{c} 3.62 \\ 9.14 \\ 12.76 \end{array}$	3.44 9.16 12.60	4.63 9.47 14.10	4.57 9.15 13.72	4.60 9.30 13.80	4.96 9.10 14.06	
Actual weight of Fat, in lbs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	0.825 16.5 2.08 8.32	0.66 13.2 1.77 7.08	1.35 27.0 2.76 11.04	1.21 24.2 2.43 9.72	1.46 29.2 2.96 11.84	1.31 26.2 2.40 9.60	
For time since Calving For weight of Milk (lbs.)  Points { For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)			55-7 51.2 20.8	il i	58.2 55.4 55.4	4	8 3 2 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Deductions Points gained	87.2	No. Section Se	127.7	7	135.0	0	84·5  84·5
Remarks and Awards		*	2nd Prize.	Prize.	1st E	1st Prize.	Busk Cup

CLASS 14.—RED POLL COWS (ENTRIED IN OR ELICIBLE FOR THE HERD BOOK, BORN ON OR PHRYIOUS TO 1ST AUGUST, 1920).

BORN ON OK PREVIOUS TO ISL ACCOST, 1920.	208 211 212	Hardwick Ashberry. Spalding Pearl. Hutton Dahlia 2nd, Harefield Ruth.	July 5, 1913. April 2, 1919. Sept. 24, 1919. Feb.	1,487 1,176 1,280	Aug. 3. Sept. 14. Sep	28 22	n Even Morn Even Morn Even	$\dots 31.1  35.4  33.3  28.5  35.3  30.3  19.0$	$\dots$ 31.4 31.9 33.1 25.3 32.1 29.0 19.8	$62.5  ext{ } 67.3  ext{ } 66.4  ext{ } 53.8  ext{ } 67.4  ext{ } 59.3  ext{ } 38.8$	$\dots$ 31.25 33.65 33.2 26.9 33.7 29.65 19.4 15.75	3.12 $5.07$ $3.27$ $4.45$ $3.50$ $4.31$ $6.58$	9.74 8.95 9.47 8.50 9.66 8.75 10.32	12.86	0.97  1.71  1.08  1.20  1.18  1.28  1.27  1.05	19.4 34.2 21.6 24.0 23.6 2	an Fat, in lbs. 3.04 3.01 3.15 2.29 3.25 2.60 2.00 1.40	$yy 4 \dots \dots 12.16  12.04  12.60  9.16  13.00  10.40  8.00  5.84$	3.7	64.9 60.1 63.3	× 20) 53.6 45.6 49.2 46.4	24.2 21.8 2.3.4 13.8	-	eductions	146.4	1st Prize Reserve 2nd Prize.
JORN ON	Number	: : : : : : : : : : : : : : : : : : : :		weight, in lbs	:	Days since Calving		Weight of Milk. 1st day	:	:	eg		of Solids other than		Actual weight of Fat, in lbs	y 20	ij		:		Points \ For weight of Fat (lbs, \times 20)	(1bs. × 4)	Total	Deductions	Points gained	Remarks and Awards Denotes the Prize

CLASS 14.—RED POLL COWS (BORN ON OR PREVIOUS TO 1ST AUGUST, 1920)—Continued.	
AUGUST	The Party of the P
PREVIOUS TO 1ST	The same of the sa
(BORN ON OR	
POLL COWS	
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6 Red Beng	July 14, 1911.  1,242 Selit 18. 31 Morn Fren 88-4 30-2 86-0 29-3 77-2 29-75 77-2 29-75 9-19 8-88 19
216 Gressenhall Red Bany	July 14, 1,24, 1,24, 1,24, 1,24, 1,37,2 1,37
215 Floss 29th	Oct. 1. 1916.  May 1.  171  form Even 5.2 20.1 3.4 21.0 3.4 21.0 3.6 41.1 4.3 20.65 6.2 1.01 1.00 0.2 20.0 0.2 20.0 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.00 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3
215 Tendring Floss 29th	4 2 2 4 2 1 1 2
::	
::	##, in lbs
::	
::	##, in lbs
: :	in lbs Calving Calving Till, 1st day fills, 2nd day Total Average  Total  Go Points mul ht of Points mul ht of Solids of r weight of R r weight of R r weight of R r weight of Se
Number Name	Born
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CLASS 15.—RED POLL COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. BORN AFFRE ST. AUGUST. 1920. AND PREVIOUS TO 1ST AUGUST, 1922).

### Supervision	Number	:	÷	:	:	[5]	818		219	64	221	25	222
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		:	:	:	:	Model	Ruby	White H	fill Pansy.	Saham	Leezie	Shotford Ind	y Mary 5
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						, , , , , , , , , , , , , , , , , , ,	,		1001	1.7	1001	Leb 99	1099
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Born	:	:	:	:	Mar. 31	1921.	Jan. Z	9, 1921.	FCD. 4	F, 152.	27.03.1	1042.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Live weight, in lbs.	:	:	:	:	1,7	25		011	7,1	202	1,12	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Last Calved	:	:	:	:	reb.	17.	Sen	t. 23.	dac	L. 437.	adac	: : .
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Days since Calving	:	:	:	:	24	4		92	N	9	4	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						Morn	Even	Morn	Even	Morn	$\mathbf{Even}$	Morn	Even
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Weight of Wills 1st	day.	:	:		12.4	11.1	28.2	22.3	26.2	21.4	23.5	50·6
	Weight of Milk, 2n	d day	: :	: :		14.9	11.8	27.8	21.5	56.5	21.2	54.6	19:0
	Total	•	;		:	27.3	22.9	56.0	43.8	52.4	45.6	48.1	40 5
$ \begin{cases} \text{Fat} & \dots & $	Aver	oğı	:	:	:	13.65	11.45	58.0	21.9	26.2	21.3	24.05	20.25
$ \begin{cases} \text{Solids other than Fat} & 9.34 & 9.26 & 9.29 & 8.95 & 9.51 & 9.26 \\ \text{(Total Solids} & \dots & 15.26 & 14.10 & 13.96 & 13.54 & 15.12 & 14.38 \\ \text{of the polity in lbs.} & \dots & 0.81 & 0.55 & 1.31 & 1.01 & 1.47 & 1.09 \\ \text{of the multiply by } 20 & 16.2 & 11.0 & 2.62 & 20.2 & 29.4 & 21.8 \\ \text{Solids other than Fat, in lbs.} & 1.27 & 1.06 & 2.60 & 1.96 & 2.49 & 1.97 \\ \text{other multiply by } 4 & \dots & 5.08 & 4.24 & 10.40 & 7.84 & 9.96 & 7.88 \\ \text{other multiply by } 4 & \dots & 2.07 & 2.57 & 49.9 & 47.5 \\ \text{sight of Milk (lbs.)} & 20) & 27.2 & 46.4 & 51.2 \\ \text{sight of Solids other than Fat} & 9.3 & 18.2 & 17.8 \\ \text{Solids other than Fat} & 9.3 & 18.2 & 17.8 \\ \text{Deductions} & & & & & & & & & & & & & & & & & & &$	Darcentage (1	(30 t			•	5.09	4.84	4.67	4.59	5.61	5.12	4.00	4.15
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	~	olids of	her than	n Fat	: :	9.34	9.56	6 5 5	8.95	9.51	9.26	88-88	8:37
tiply by 20		Cotal Sol	ids	:	-	15.26	14.10	$\overline{13.96}$	13.54	15.12	14.38	12.88	12.52
tiply by 20 16·2 11·0 26·2 20·2 29·4 21·8  ther than Fat, in lbs. 1·27 1·06 2·60 1·96 2·49 1·97  tiply by 4 5·08 4·24 10·40 7·84 9·96 7·88  alving lik (lbs.) 25·1 49·9 47·5  tt (lbs. × 20) 27·2 46·4 51·2  ids other than Fat 9·3 18·2 17·8  Total 73·6 114·5 116·5  Deductions 73·6 114·5  Points gained 73·6 114·5  Red Poll Cattle 16·2 10·40 10·40 10·40  Index conditions 114·5 116·5  And Prize. Red Poll Cattle	Actual weight of F	at. in lbs		:		0.81	0.55	1:31	1.01	1.47	1.09	96.0	0.84
Lier than Fat, in Ibs.       1.27       1.06       2.60       1.96       2.49       1.97         tiply by 4        5.08       4.24       10.40       7.84       9.96       7.88         alving         25.0       49.9       47.5       47.5         ilk (lbs.)        25.1       46.4       51.2       51.2         ilk (lbs.)        27.2       46.4       51.2       17.8         ilds other than Fat       9.3       18.2       17.8         Total        73.6       114.5       116.5         Deductions        13.6       114.5       116.5         Points gained       73.6       114.5       114.5       116.5         Points gained       73.6       114.5       18cd Poll Cattle	Calculation of Poin	ts multi	ply by	20	:	16.2	11.0	26.2	20.5	29.4	21.8	19.2	16.8
tiply by 4 5:08 4:24 10:40 7:84 9:96 7:88 alving 25:1 49:9 47:5 112:0 49:9 47:5 116:1 (lbs. × 20) 27:2 46:4 51:2 116:3 116:5 114:5 114:5 116:5 116:5 114:5 114:5 116:5 116:5 116:5 114:5 116:5 116:5 114:5 116	Actual weight of Sc	lids other	er than	Fat. in		1.27	1.06	2.60	1.96	2.49	1.97	2.13	1.70
alving      12.0     49.9     47.5       ilk (lbs.)      25.1     49.9     47.5       it (lbs. × 20)      27.2     46.4     51.2       lids other than Fat     9.3     118.2     17.8       Total      73.6     114.5     116.5       Deductions      13.6     114.5     116.5       Points gained     73.6     114.5     184 Prize.         184 Prize.     184 Prize.	Calculation of Poin	ts multi	yd yld	,	:	5.08	4.24	10.40	7.84	96-6	7.88	8.52	08.9
lik (lbs.)     25-1     49·9     47·5       tr (lbs. × 20)     27·2     46·4     51·2       dids other than Fat     9·3     18·2     17·8       Total     73·6     114·5     116·5       Definits gained     73·6     114·5     116·5       Points gained     73·6     114·5     18·5       Red Point Prize     18·5     18·5	( Hor time	ince Cal	vino		1	19.6	**************************************		-			9.0	
if (lbs. × 20)     27.2     46.4     51.2       dids other than Fat     9.3     18.2     17.8       Total     73.6     114.5     116.5       Deductions     73.6     114.9     116.5       Points gained     73.6     114.9     18t Prize.         18t Prize.     18t Prize.	For weigh	t of Mill	The /	:	:	95.		49	Ģ.	47	ī,	44.3	
17.8   17.8   18.2   17.8   17.8   17.8   17.8   17.8   17.9	~	t of Fat	(lbs. ×	20)	: :	27.5	. 67	16	·-	51	બ	39.	_
Total 73-6 114-5 116-5  Deductions 73-6 114-5 116-5  Points gained 73-6 114-9 116-5  18-6 114-9 18-1 18-1 18-1 18-1 18-1 18-1 18-1 18	For weigh	t of Soli	ds othe	r than k	at	•	_	2	c.	1.7	×	7.3	
Total 73.6 114.5 116.5 116.5 Deductions Points gained 73.6 114.6 114.7 116.5 Ist Prize Red Poll Cattle.	× 'sor) )	(+	:	:	:		•	07	9				
Points gained 73-6   114-5   116-5   18-17ze.   18-2nd Prize.   Red Poll Cattle			Tota	l	:	73.6		11,	ic	116	iė	10.01	., -
nt Prize. Red Poll Cattle			Poin	ts gaine	: :: g	73.		111	100	116	.5	3.98	
	Remarks and Awa	sp.	:	:	:			2nd	Prize.	1st Red Po	Prize oli Cattle	3rd P Eq. Res.	rize, Red Pa

CLASS 16.—RED POLL HEIFERS (ENTERED IN OR BIGGIBLE FOR THE HERD BOOK. BORN ON OR AFTER 1ST AUGUST, 1922).

-1-4				
Basildon Fascination. Basildon Plotter 2nd. Hutton Apricot 2nd. Saham Darker Draught	$\begin{array}{c} \mathrm{Scpt.} \ 4, \ 1922. \\ 1,306 \\ \mathrm{July} \ 30. \\ 81 \end{array}$	n Even 20-3 19-3 39-6 19-8	19 5-83 10 19-63 50 15-46 10 15-46 10 15-46 10 10 10 10 10 10 10 10 10 10 10 10 10 1	18t Prize. Red Poll Cattle Society 8 Page.
Saham I	Sept Ju	Morn 20·9 25·1 46·0 23·0	4-19 10-01 14-50 1-03 20-6 2-32 9-28 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	18 Red Soci
227 °Apricot 2nd.	May 6, 1923. 1,176 Sept. 24. 25	Even 19.4 18.9 38.3	3.98 8.32 8.32 12.30 0.76 1.52 1.59 6.36 6.36 6.36	er Prize.
9 Hutton A	May 6, 19 1,176 Sept. 2	Morn 26.4 23.5 49.9 24.95	3.49 8.85 12.34 0.87 17.4 2.21 8.84 44.1 32.6 15.2 16.9	3rd Prize.
225 Plotter 2nd.	June 7, 1923. 916 Sept. 3. 46	Even 20.1 21.6 41.7 20.85	4-93 8-97 13-90 1-03 20-6 1-87 7-48 6 6	Prize. Red Poll.
2 Basildon P	June 7, 195 916 Sept. 3.	Morn 24.8 24.6 49.4 24.7	4-71 9-25 13-96 1-16 23-2 9-12 9-12 45-6 45-6 43-8	2nd Prize. Reserve Red Poll Cattle Soc.'s Prize.
224 Fascination,	April 18, 1923. 1,086 Aug. 18. 62	Even 14.5 15.6 30.1 15.05	4.32 8.62 12.94 1.30 1.30 5.20 5.20	nd ed.
2 Bayildon F	April 18, 19 1,086 Aug. 18,	Morn 19·1 20·5 39·6 19·8	3.64 9.32 12.96 0.72 14.4 1.84 7.36 2.2 3.4.9 3.4.9 2.7.4	Reserve a Highly Commend
: :	::::	1111	11bs.	
: <b>:</b>	::::	::::	than Fat  s  s  r by 20  than Fat, in lbs.  by 4  ng  thy 4  other than Fat  cother than Fat  Total  Deductions  Deductions	
: :	::::	::::	ar than Fa:	:
: :	::::	ay 	Fat Solids other than Fat Cotal Solids Fat, in lbs mts multiply by 20 Solids other than Fat, in the multiply by 4 since Calving it of Milk (lbs.) it of Milk (lbs.) it of Solids other than X 4) Total Deduction	i
::	lbs. ing	lk, 1st day Ik, 2nd day Total Average	tage    Solids other than Fat   Solids other than Fat   Total Solids   Total Solids   Total Solids   Solids other than Fat, in Ibs   On of Points multiply by 20   Solids other than Fat, in Ibs   For time since Calving   For weight of Milk (Ibs.)   For weight of Fat (Ibs. × 20)   For weight of Solids other than Fat (Ibs. × 4)   Total   Deductions   Deductions   Points cained	wards
::	ht, in ed e Calv	Milk, Milk, To	age on of Ik.  Ik.  ight of P ight of I ight of P ight of I ight o	und A
Number Name	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average	Percentage Solids other than Fat  the Milk. Total Solids	Remarks and Awards

CLASS 16.—RED POLL HEIFERS (Born on or after 1st August, 1922) —Continued.	Number 230 Name Meddler Gleum.	May	sql ui,	ies	Days since Calving 36	Morn	Weight of Milk, 1st day 13·1 12·8 Weight of Milk, 9nd day 13·9 11·6	27.0	ge 13.5	(Fat 3.84	4	the Milk. (Total Solids 13·10 13·78	Actual weight of Fat, in lbs 0.52 (0.585)	Calculation of Points multiply by 20 10-4 11.7	Actual weight of Solids other than Fat, in lbs. 1.25 1.10	Calculation of Points multiply by 4 5.00 4.40	For time since Calving	For weight of Milk (lbs.)	Points $\left\{ \text{For weight of Fat (lbs.} \times 20 \right\} \dots 22.1$	olids other than Fa	Total	tions	Ş	
CLASS 16.—RED POLI	Number Name	Born	Live weight,	Last Calved	Days since Ca		Weight of Mi Weight of Mi			Percentage	Composition	the Milk.	Actual weigh	Calculation o	Actual weigh	Calculation o	For		~	For				

CLASS 17.—BLUE ALBION COWS (EXTERED IN OR ELIGIBLE FOR THE HERD BOOK).

					9 2		
	242 fraibonine (fiddy (fit)	1919. 1,367 Oct. 2. 17	Even 26.6 25.3 51.9 25.95	5.93 8.67 14.60	30.8 2.25 9.00	56·1 54·8 20·3 131·2	131.2 3rd Prize.
The same of the sa	2. Badbonn	81.0	Morn 31.3 29.0 60.3 30.15	4.00 9.36 13.36	24.0 2.82 11.28	13 12 9 9 U	13.
	241 Pike Verocity.	1919. 1 519 ppt. 11. 38	Even 28·6 31·6 60·2 30·1	3.87 8.53 12.40	$\begin{array}{c} 23.2 \\ 2.57 \\ 10.28 \end{array}$	69-0 51-8 24-4 45-2	145.2 1st Prize.
	241 Pike Ver	1919. 1 519 Sept. 11. 38	Morn 41.0 36.7 77.7 38.85	3.67 9.05 12.72	3.52 3.52 14.08	69-0 51-8 24-4 145-2	145-2 1st Pri
1	) Marigold,	15. 3.27.	Even 20.8 20.4 41.2 20.6	3-22 8-66 11-88	$\frac{0.00}{13.2}$ $\frac{1.79}{7.16}$	& & ○ → 10	Ģ
1	239 Bradkourne Marigold	1,515 Aug. 27. 53	Morn 27.2 25.2 52.4 26.2	3.80 8.84 12.64	2.31 9.24	13 46.8 33.0 33.0 16.4 97.5	97.5
1	1		Even 25-9 25-6 51-5 25-75	5.26 9.06 14.32	27.2 2.32 9.28	1971 881	8 e and hly nded.
	238 Bramshall Joan	1,328 Sept. 14. 35	Morn 30.5 29.2 59.7 29.85	4.40 $9.62$ $14.02$	1.31 26.2 2.87 11.48	55.6 53.4 53.4 129.8	129.8 Reserve and Highly Commended
-	: · :	:::::		1 ·	lbs.	Fat:::	ea
	::	::::	: ::::	 1 Fat 	 20 Fat, in f	bs.) bs. (1.1) bs. (1.1) bs. (1.1) bs. (1.1) cother than cothe	Points gained
	::	::::	: ::::	 er thar ds	ly by ? r than ly by 4	ing (lbs.) lbs. × s other Total	Point
1	::	::::	15	Fat Solids other than Total Solids	multip s other multip	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than (lbs. × 4)  Total  Total  Deductions	:
	: :	 Ibs.	lk, 1st day lk, 2nd day Total Average	Fat Solids Total 8	oints  oints  f Solid	or time sind or weight of or weight of or weight of (lbs. × 4)	wards
	; ;	rr. ght, in red	f Milk, f Milk, T	age ion of Ik.	eight c on of I eight o on of I	For til For we For we For we (1bs.	and A
	Number Name	Born In Ibs. Live weight, in Ibs. Last Calved Days since Calving	Weight of Milk, 1st day Total Average	Percentage Composition of the Wilk.	Acculat Weight of Pat, In 198 Calculation of Points multiply by 20 Accual weight of Solids other than Fat, in 19s. Calculation of Points multiply by 4	Points	Remarks and Awards
1			•	-			, ,

CLASS 17, -BLUE ALBION COWS (ENTERED IN OR ELICIBLE FOR THE HERD BOOK)-Continued.

243 Pike Venice.	1920. 1,358 Sept. 14.	135 n		15.14 14.42 1.29 1.56 25.8 31.2 2.93 2.36 11.72 9.44	59.4 57.0 21.2 137.6	2nd Prize.
Number	Born	Calving fills, 1st day fills, 2nd day	$\begin{array}{c} \text{Tots} \\ \text{Ave} \\ \text{of} \end{array}$	Actual weight of Fat, in Ibs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in Ibs. Calculation of Points multiply by 4	For time since Calving	Remarks and Awards

CLASS 18,-WELSH BLACK COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK).

The second law was been second and the second secon	-		and the contract of the contra		
Number Name	::	; ;	Mwynig Hunod.	251 Hall Green (19th,	
Born Live weight, in lbs Last Cylved		: : : :	Oct. 13, 1920. 1,259 Sept. 10. 39	Oct. 17, 1921 1,065 Sept. 4, 45	
Weight of Milk, 1st day Weight of Milk, 2nd day Total			Morn Even 23.8 21.2 24.5 20.6 48.3 41.8	Morn Even 18-4 18-5 26-5 20-8 44-9 39-3	1
Percentage [Fat Composition of Solids other the Milk. [Total Solids Actual weight of Fat, in 1bs	Tage	Fat			1 (1)
Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	ply by 20. er than Fa ply by 4.	at, in lbs.	20 8 18·3 2 17 1·80 8·68 7·20	30-2 20-4 1-95 1.78 7-80 7-12	
For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. × 4)  Total  Deductions  Points gained	k (lbs.) flbs. × 20) ds other than Total Deductions Points gain	bs.) 3s. × 20) other than Fat Total Deductions	45.1 39.1 15.9 100.1	0.5 42:1 50:6 14:9 108:1	1 : 1 1
Remarks and Awards	:	:	2nd Prize.	1st Prize.	

CLASS 19.—-AYRSHIRE COWS.

						1
255 Grange Pansy 6th	March 4, 1917. 1,120 Aug. 10. 70	n Even 20-3 20-0 40-3 20-15	5.31 8.91 14.22	21.4 21.4 ) 1.80 7.3	3 0 43·1 35·6 115·2 96 9	Highly Commended.
Grang	Mare	Morn 24.2 21.6 45.8 22.9	3·11 8·75 11·86	0.71 14.2 2.00 8.0	De la companya de la	Con
254 Cargen Holm Proud Lady ven	Feb. 3, 1921. 1,025 Sept. 11.	Even 24.6 24.2 48.8 24.4	5.91 8.85 14.76	1.44 28.8 2.16 8.64	]8	Highly Commended. Reserve for National Milk Cup
Cargen He Ledy	Feb. 3, 19 1,025 Sept. 11, 38	Morn 32.0 30.0 62.0 31.0	4.66 8-80 13-46	1.44 28.8 2.72 10.88	55-4 57-6 19-5 132-5	Highly Co
253 Netherton Queen (Recented 1th	Jan 28, 1920. 1,358 Sept. 17. 32	Even 24.6 26.5 51.1 25 55	5·22 9·10 14·32	1.33 26.6 2.32 9.28	1	Reserve for Morrison Trophy. Highly Commended
Nethert	Jan 28	Morn 29.5 29.8 59.3 29.65	4.42 9.04 13.46	1:31 26:2 2:67 10:68	20 0 20 0 128 0 198 0	Reservantson Highly C
252 Catlinns Belmda	A <sub>1</sub> ril 28, 1921. 1,208 Cct. 1.	Even 26.1 25.8 51 9 25.95	4.43 8.97 13.40	1.15 23.0 2.33 9.39	1	Highly Commended
ļ .	April 2 1,5 Cel	Morn 30.2 29.7 59.9 29.95	4.43 9.17 13.60	1.33 26.6 2.75	20.3 20.3 125.8	Hig
::	<i>:</i> : : :		::::	 n Ibs.	Fat	
::	::::		 m Fat 	20 Fat, ii	ng	o :
::	::::	::::	 her the lids	s ply by er thar	lving k (lbs.) (lbs. × ds other Total Deduc	:
::	::::	day day 	Fat Solids other than Total Solids	t, in lb s multi ids oth	nce Ca of Mill of Fat of Soli	
::	in lbs.	Weight of Milk, 1st day Weight of Milk, 2nd day Total	<i>ل</i>	Actual weight of Fat, in lbs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs.	For times mustyly by ** For time since Calving For weight of Milk (lbs.) For weight of Solids other than (lbs. × 4) Total Deductions Points eain	Remarks and Awards
er	Born Live weight, in Ibs. Last Calved Days since Calving	t of Mi t of Mi	Percentage Composition of the Milk.	weigh ation o weigh	For For For (1)	ks and
Number Name	Born Live weight Last Calved Days since (	Weight Weight	Perc Compo the	Actual Calcula Actual	Points	Remarl
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CLASS 19,—AYRSHIRE
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Remarks and Awards
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CLASS 19,—AYRSHIRE COWS—Continued.

265 Lessnessork Famie, Millantae Maydower,	April 3, 1917. 1,316 Aug. 20. 60	Mom Even 47-0 31-1 46-8 33-9 93-8 65-0 46-9 32-5	3.31 3.86 8.65 8.76 11.96 12.62 1.55 1.26	Ç1 L	2.0 79.4 56.2 27.6	165-2 165-2 165-2 165-7ize, Gold Medal. Barham Cup, Shirley Cup, Rowallan Cup.
265 snessock Famie.	Mar. 15, 1918. 1,204 Sept. 13. 36	Morn Even 25.9 22.5 23.2 23.5 49.1 46.0 24.55 23.0	4.72 5.07 7.80 8.13 12.52 13.20 1.16 1.17	2.	47.6 46.6 15.1	109-3 20-0 89-3
264 Round Bush Sunheam 2nd Less	Aug. 6, 1919. M. 1,402 Sept. 18.	1 Even 28 1 27.4 55.5 5 27.75	3.51 5.90 4 9.57 8.70 7 13.08 14.60 12 1.10 1.63	32.6 32.6 2.41	61.7 56.4 22.6	140.7 140.7 3rd Prize.
261 Chairmploch Chice	Feb. 20, 1916. A1, 305 Sept. 7.	n Even Morn 191 34-9 20-7 33-0 39-8 67-9 19-9 33-95	4.13 8.89 13.02 1.895	$ \begin{array}{c c} 16.5 \\ \hline 16.5 \\ \hline 1.77 \\ \hline 1.08 \end{array} $	0 2 46.4 32.3 16.3	95.2 10.0 85.2
	Feb	Morn 26.6 26.4 53.0	n Fat 2:98 8:70 11:68		0)	Total Deductions Points gained
			· tha	multiply by 20 Is other than Fat, multiply by 4	.) × 2 her t	:
Number	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average	Percentage Composition of S the Milk.  Actual section of T	Actual Weight of Park, III 108 Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	For time since Calving For weight of Milk (lbs.) Points { For weight of Fat (lbs. > For weight of Solids oth (lbs. * 4 )	Remarks and Awards

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	275 Dunlop Harpsichord,	Jan. 19, 1921.	Sept. 9.	Morn Even 32.7 28.5	İ	29.95 26.15	3.55 4.83 8.95 8.65	12.50 13.48		21.2 $25.3$	2.68 2.26	10.72 9.04	56·1 46·5	19.8	122.4	122.4	Highly Commended.
1	270 275 Enletholm Received and Low Milton White Swell   Dunlop Harpstehond.	Jan. 31, 1918.	1,108 Sept 27	Ħ	33.7 25.9 65.6 53.4	32.8 26.7	3.54 5.11 9.60 9.11	13.14 14.22	)	23.2 27.2	3.15 2.44	12.60 9.76	59·5 50·4	22.4	132.3	132.3	Highly Commended.
	271 Harleyholm Rosebud 2nd	Feb. 27, 1920.	$\begin{array}{c} 1.320\\ \mathrm{Sept.} \ 22\\ 97\end{array}$	Morn Even 32.6 26.1		32.6 26.6	4·46 5·05 8·60 8·67	13.06 13.72		29.0 27.0	2.80 2.31	11.20   9.24	59.2 56.0	204	135.6	135.6	Highly Commended.
	270 Thornhill Empress.	Dec. 16, 1919.	1,147 Sept. 6.	a la	27.4 21.7 58.5 47.5	29.25 23.75	3.43 5.72 8.53 8.66	11.96 14.38	1.00 1.36	20.0 27.2	2.50  2.06	10.00 8.24	0·3 53·0 47·2	18.2	118.7	118-7	Highly Commended.
TOTAL COURSE AND AND AND AND AND AND AND AND AND AND	Number	:		Weight of Milk, 1st day	Weight of Milk, 2nd day Total	ge	ಲ		Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For weight of Milk (lbs.)  For weight of Fig. (18s.)  Points  For weight of Fat (lbs. 20)	For Weight of Solids other than rate (1bs. × 4)		Points gained	Remarks and Awards

CLASS 20.—AYRSHIRE HEIFERS (Registered or Eligible for Registration with a Number in the Hook or in the Appendices. Born on or after 1st August, 1922).

279 ('argen Holm White Stockings 10th,	Nov. 8, 1922.	1,109 Sept. 26.	£3	e e	46.6 41.7		3.47 5.25 8.91 8.81		0.81 1.09	16.2 21.8	-	8.28 7.36	4.1.9	38-0	1	15.6	97.8	97.8	3rd Prize.
Iohn y 10th	Nov. 24, 1922.	912 Sept. 14.	35	Morn Even 23.3 18.1		22.8 18.0	4.22 5.62 9.18 8.76		0.96 1.01	19.2 20.2	2.09 1.58	8.36 6.32	40.0	39.4	1	14.7	94.9	94.9	Highly Commended.
276 277 (argen   1787 (argen   1897) (argen   1897)	Jan. 8, 1923.	1,155 Sept. 28.	21	Morn Even 17.9 14.5	35.3 30.8	17.65 15.4	4.52 5.48 9.26 9.04	-	0.80 0.85	16.0 17.0	1.63 1.40	6.52 5.60	99.1	33.0	,	1.21	78.2	78.2	Highly Commended.
	922.	1,046 Aug. 17.	63	Morn Even 18.4 15.8		18.35 16.8	4.73 5.10 8.75 8.80		0.87 0.855	17.4 17.1	1.60 1.48	6.40 5.92	2.3	34.5		12.3	84.3	84.3	Highly Commended.
Number	Born	Live weight, in lbs Live weight, in lbs	Days since Calving	Weight of Milk, 1st day	Weight of Mark, 2nd day Total	Average	Percentage Fat Composition of Solids other than Bat	_	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For time since Calving	Points { For weight of Fat (lbs. × 20)	For weight of Solids other than Fat	(108. × 4.)	Total Deductions	Points gained	Remarks and Awards

—Continued.
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284 287 Hobsland Violet 4th, Hobsland Lucy 2nd Byrcholm Viper 2nd	Aug. 28, 1922. 1,310 Sept. 22. 27	23.6 23.6 23.6 23.75 23.75 1 5.01 1 13.68 0 1.19 23.8 8 2.06 2 8.24 51.9	17.8 115.5 116.5
Byrehol	Aug	Morn 27.1 29.1 29.1 29.1 29.1 29.1 29.1 28.1 28.1 12.4 12.4 12.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	1 18
286 d Lucy 2nd	Jan. 1, 1923. 1,181 Oct. 1.	10 Even 15.5 16.4 31.9 15.95 15.95 13.12 0.69 0.69 13.8 13.8 13.8 13.8 13.8 13.8 27.6	12.2 74.3
2 Hobsland	Jan. J 1, Oc	Morm 18-1 18-9 37-0 18-5 8-86 12-60 0-69 13-8 13-8 13-8 13-8 13-8 13-8 13-8 13-8	12·2 74·3 74·3 Highly Commonded
284 I Violet 4th.	v. 15, 1922. 1,208 Sept. 11. 38	Even 18.7 18.3 37.0 18.5 4.50 9.24 9.24 13.74 16.6 1.72 6.88	14·3 87·1 87·1 Highly
28 Hobsland	Nov. 15, 1922. 1,208 Sept. 11.	Morn Morn 1999 21-9 41-8 20-9 12-92 12-92 16-8 16-8 16-8 16-8 18-91 13-92 16-8 18-92 16-8 18-92 16-8 18-92 16-8 18-92 18	14-3 87-1 87-1 Highly Commended.
280 Cargen Holm Miss Robb 15th.	5, 1923.	19-5 17-8 37-3 18-65 4-86 9-13 13-98 13-98 18-0 18-0 18-0 18-0	15·5 96·5 96·5 ighly nended.
	March 15, 1923. 972 Oct. 1. 18	Morn 24.8 23.5 48.15 24.15 24.15 24.16 13.28 13.28 13.28 20.2 2.02 2.18 8.72	15·5 96·5 96·5 Highly Commended.
::	: : : :		Fat
::	::::	n Fat 20 4 20)	other than Fat Total Deductions Points gained
::	::::	f Milk, 1st day	For weight of Solids other than (lbs. × 4) Total Points gain
::	::::	st day nd day arage Solids other . Total Solids Fat, in lbs ints multiply Solids other t ints multiply since Calvin ht, of Fat (Ill)	of Solice
::	η Ibs.	f Milk, 1st day f Milk, 2nd day Total Average tage Solids other tha ilk. Total Solids on of Points multiply by sight of Solids other than of Points multiply by sight of Solids other than of Points multiply by sight of Solids other than of Points multiply by sight of Solids other than of Points multiply by	weight of the state of the sta
	ight, in lyed nee Cal	eight of Mill eight of Mill eight of Mill To To To To To To To To To To To To To	For w
Number	Born Itive weight, in 1bs. Last Calved Days since Calving	Weight of Milk, 1st day	For weight of Si (Ibs. × 4)  Remarks and Awards
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CLASS 20.—AYRSHIRE HEIFERS (Born on or after 1st August, 1922)—Continued.

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į.	293 Tilellan Eillat	an ruga	Jan. 30, 1923.	000,1	Sept. 11.	88		Even.	19.5	18.8	38.0	10.0	5.03	9.43	14-44	96.0	19.5	1.79	7.16		42.9	•	0.3	7.0	99 s		8-00	2nd Prize.
	1.1160		Jan. 3	1	Sept		1	Morn	24.2	23.5	47.7	23.85	4.56	9.20	13.76	1.00	21.8	9.19	8 76			4	-	7.F	36 	The second second	36	2nd
	I.	umgun	, 1922.	æ	<del>-i</del> .	15	1	Even	15.5	15.8	31.3	15.65	4.85	9.53	14.38	0.76	15.2	1.49	5.96	Manufactures attractives.	ro.	7		; :	οo		<b>2</b> 0	hly ended.
	291	Diminop Sumann	Sept. 5, 1929.	1,248	Oct. 4	-		Morn	18.0	19.1	37.1	18.55	5.00	9.34	14.34	0.925	18.5	1.73	6.9		34.2			12.9	808		8.08	Highly Commended.
	289	Dazzier	1922.	2	21.			Even	18.8	18.5	37.3	18.65	5.38	8.92	14.30	1.00	20.0	1.66	6.64.	- Annie Grand Company of the Company			-			1		ghly nded.
	52	Byrcholm Dazzier	Dec. 18, 1922.	1,020	Sept. 21.	36		Morn	23.1	23.0	46.1	23.05	4.48	9.14	13.62	1.03	20.6	2.11	8.44		41.7	40.6	2	15.1	97.4	ı	97.4	Reserve and Highly Commended
	œ ;	Diamond	1923.	10	_	;		Even	17.2	21.1	38.3	19-15	4.41	9.41	13.82	0.84	8.91	1.8(1)	7.20			_						ıly nded.
1	288	Byrcholm Diamond	Feb. 14, 1923.	1,02	Oct	5	)T	Morn	22.6	23.4	46.0	23.0	3.32	9.18	12.50	0.76	15.2	9.11	8.44	entrante de la constitución de l	42.2	32.0		15.6	8.68	-	8.68	Highly Commended
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	:	:	:	:	:	:	:			:		: :		Fat	:	;		Pot in	4 ··· 4	:	:	20)	than	:	:	Deductions	gain	:
1	:	:	:	;	:	:	:			:		: :		Solids other than			7 by 2	then ]	y by 4	ng '	lbs.)	y.X	For weight of Solids other than J	:	Total	Deduc	Points gained	:
	:	:	:		:	:	:			5		: :		othe	Total Solids	lla.	ultipl	, 440	ultiply	Calvi	Milk (	Fat (I	Solids	:				•
		•	•		•	•	• 60		of day	وقي م	(   -	g.	100	Solids	Total	Pat. ir	nts m	olida	nts m	since	ht of	ht of	ht of S	<del>4</del> )				rds
	:	:	:	in lb	TIT TIT	:	alving		111.	111, 9	Total	Ave		گ	5	t of T	f Poi	4	of Poi	time	weig	weig	weig	(lbs. $\times$ 4)				l Awa
i	:	፥	;	oicht	ugus,	arvea.	ince C		M to	3 7	1		400	rerentage	the Milk.	weigh	tion (	10:000	werg.	For	For	√ For	For	_	,			ss and
-	Number	Name	Born	Live mainht in lbs	1100 A	Last Calved	Days since Calving	•	Weinht of Wills 1st. day	Weight of Milk 2nd day	T Group		ć	Composition	the	Actual weight of Eat. in lhs.	Calculation of Points multiply by 20	Actual maint of Colida other than Wet in the	Calculation of Points multiply by			Points						Remarks and Awards
-																												

CLASS 20 -AYRSHIRE HEIFERS (B	HEIFERS (BORN ON OR AFTER	Isr Au	)-Continued.
Number		Pourlas Hall Janet Ann	Pouglas Hall Janet Ann Leasnesson & Dusy Cham
**************************************	Dansy and	2nd	<del>III</del>
Born	Oct. 25, 1922.	Nov. 16, 1922.	Mar. 10, 1923.
Live weight, in lbs	1,175	1,012	1,200
Last Calved	Sept. 15.	Sept 23.	Sept. 10.
Days since Calving	34	20	33
,	ı.	Ę	1
Weight of Milk, 1st day		23.1 17.9	
Weight of Milk. 2nd day			24.9 21.0
Total	43.8 36.2	45.2 35.7	50.9 41.9
Average	21.9 18.1	22.6 17.85	25.45 20.95
_	3.39	4.78 5.08	3.58 4.76
م بيه	8.89 8.50	9.02 8.88	
the Milk.   Total Solids	12.28 12.94	13.80 13.96	12.06  13.58
Actual weight of Fat, in Ibs	0.745 0.80	1.08 0.91	0.91  0.99
Calculation of Points multiply by 20	14.9 16.0	21.6 18.2	18.2 19.8
Actual weight of Solids other than Fat, in Ibs.	1.95 1.54	2.03   1.58	2.15 1.84
Calculation of Points multiply by 4	7.80 6.16	8.12 6.32	8.60 7.36
For time since Calving			CHARLES CHARLES CHARLES AND ACCOUNTS AND ACC
For weight of Milk (lbs.)	40.0	40.5	46.4
< 20)	30.9	39.8	38.0
For weight of Solids other than Fat			
(lbs, × 4)	14.0	14.4	16.0
Total	84.9	7.46	100.4
Deductions	1	1	10.0
Points gained	84.9	94.7	90.4
Remarks and Awards		Hıghly	Highly
	Commended.	Commended.	Commended.

CLASS 21.—GUERNSEY COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. BORN ON OR PREVIOUS TO 1ST AUGUST, 1920).

Number	•	:	298		599	₩.	306	<u>ج</u>	307
:		:	Tregothnan May.		Broome Floweret 2nd	Tiegye Maze.	Maze.	Plossy of Bella Cottage	Ila Cottae
Born	:	:	Marc		Jan. 11, 1916.	Sept. 26, 1919.	, 1919.	Sept. 18, 1917.	1917.
Live weight, in lbs	:	:	1,077		1,192	1,065	99	1,084	¥ 2
Calved	:	:	Ang. 8.	Dec. Z	Dec. 28, 1924.	April 11.	111.	Man J	
Days since Calving	:	:	72	72	295	161		<b>-</b>	
			a	_	Even	Morn	Even	Morn	Even
Weight of Milk, 1st day	:	•	15.8 13.5	× -	13.7	0.01	15.7	19.4	10.7
ht of Milk, 2nd day	:	:	1	0.11	0.0		100	0.00	7 0
Total	:	:		20.5	7.7.7	38.0	29.1	28.2	+ 27
Average	:	:	17.0 13.9	10.1	11.1	19.0	14-55	14-1	11:3
Percentage ( Fat	:	:	3.93 4.55	5 4.59	7.19	7.43	7.25	00.9	6.75
<b>,</b>	Solids other than Fat	at	8.55 8.65	5 9-13	9.73	8.61	9.07	9.04	8.99
	olids	:	12.48 13.20	13.72	16.92	16.04	16.32	15 04	15.74
Actual weight of Fat. in lbs		:	0.67 0.63	3 0.465	08:0	1.41	1.05	0.85	0.755
Calculation of Points multiply by 20	ov 20	: :	13.4 12.6	9-30	16.0	28.2	21.0	17.0	16.1
Actual weight of Solids other than Fat. in Ils.	ther than Fa	t. in lbs.	1.46   1.20	0.93	1.08	1.64	1.32	1.27	1.01
Calculation of Points multiply by	tiply by 4		5.84 4.80	1	4.32	6 56	5.28	5.08	4.04
( For time since Calving			3.9	12	12.0	12.0	0	10:	_
For weight of Milk (lbs)	ille (llbs )	: :	30.9	16	21.2	33.6	9	25.3	~
Points \ For weight of Fat (lbs. × 20)	at (lbs. $\times$ 20	: : : =	26.0	52	25.3	49.3	67	35	
	lids other th	ian Fat	.=	.,					
(lbs. × 4)	:	:	10.6	∞ —	0.8	11.8	œ	1.G	_
	Total	:	70.7	99	66.5	106.6	9	2.77	<b>^1</b>
	Deductions	ons			-	1	1	1	,
	Points g	Points gained	7.07	99	66-5	106.6	6	77.2	2
ırks an l Awards	:					lst Prize.	rize.		
Remarks and Awards	:	:				lst Prize.	rize.		

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COWS
ASS 21.—GUERNSEY COWS

		,																									
	<u> </u>	olly 2nd	April 7, 1918.	1,116	Sept. 23.	92	Even	16.7	15.8	32.5	16.25	5.98	9.58	15.26	0.07	19-4	1.51	6.04		37.5	8·(	14.3		91.6	1	91.6	2nd Prize.
inned.	314	Dahlia Polly 2nd	April 7	[,1	Sep	G.1	Morn	21.1	21.4	42.5	21.25	4.80	9.70	14.50	1.02	50.4	2.06	8.24	TO STATE OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED A	66	₩ —	7		<u></u>	`	16	2nd
(05) (out	<b>0</b> 1	Bighton Caringorm.	Nov. 11, 1919.	113	Aug. 30.	9	Even	9.77	13.6	26.1	13.05	5.61	10.6	14.62	0.73	14.6	1.18	4.72	1.0	30.0		8.01		70.4		70.4	
GUST, 19.	312		Nov. 1	0 <b>,</b> 1	Aug	TC .	Morn	17.5	16.3	33.x	16.9	4.14	8.96	13.10	0.70	14.0	1.52	80.9		<u>چ</u>	28	1		2	1	20	
o Ist Au	•	mothi stom	July 12, 1920.	938	11.	00	Even	13:1	10:1	23.2	11.6	5.15	8.59	13.44	0.595	11.9	0.96	3 84	0.9	Ţ	<b>3</b>	9.6	,	ې د		6.	
EVIOUS T	309	Chemininte of Curteret London of Guadhi stoni	July 12	æ	July 11.	H	Morn	17.5	17.4	34.9	17.45	4.97	8.21	13.18	0.865	17.3	1.44	5.76	9	29.1	29	6	G	6.87	2	53.9	
ON OR PI	80	of Curteret	. 1918.	1,016	. 20.	121	Even		13.9	26.7	13.35	5.32	9.38	14.70	0.71	14.2	1.25	5.00	1	9	<b>20</b>	2		NI 1		2	
GLASS 21.—GUERRISEY COWS (Born on or previous to 1st August, 1920) Continued.	308	Cheminante	June 5, 1918.	1,0	June 20.	77	Morn		.8	364	18.2	4.85	9.19	14.04	0.88	17.6	1.68	6.72	*	31.6	31.8	11.7	100	83.5		83.2	
SC	:	:	-:	:	:	:		:	:	:	:	:	:	:	:	:	ı lbs.	:	:	:	: .	r art	•		:	ed	:
SEX	:	:	:	:	:	:		:	:	:	:	:	Fat	:	:		Fat, ii	:	:	:	50)	unan	:	Fotal Doduetions		Points gained	:
OEKN	:	:	:	:	፥	:		:	:	:	:	Fat	her than	lids	:	ply by 2	er than	ply by 4	ving	For weight of Milk (Ibs.)	For weight of Fat (lbs. $\times$ 20)	(1bs. $\times 4$ )		Total	Toran	Point	:
216	:	:	:	:	:	:		ay	aay	:	:	: :	ids of	Total Solids	, in lb	multi	ds oth	multi	ce Ca	of Mill	of Fat	1000 10					:
LASS .	:	:	:;	. Ibs.	:.	ving	1.0	3 181 (	; znd	Total.	Average			$\mathbb{T}_0$	of Fat	Points	iloS jc	Points	For time since Calving	eight	eight	T weignt (Ibs. × 4)					wards
	:	:	;	gnt, m	zed Zed	3e Cal	£ WEIL	# M:11.	MILIKE 1	_	¥	tage	ion o	ilk.	eight	on of	eight (	jo uc	For ti	For w	Forw	i ger					and A
	Number	Name	Born	Live weight, in lbs.	Last Calved	Days since Calving	Woicht	Weight of Mill, 9-3 3	weight of milk, and day			Percentage	Composition of	the Milk.	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	<u>`</u>		Points <		J				Remarks and Awards

CLASS 22.—GUERNSEY COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. BORN AFTER 1ST AUGUST, 1920).

Number Name	::	::	::	::	316 Southern Statette		317 Tunwoith Lamorran	317 h Lamorran	318 Daldia Ruby.	318 la Ruby.	319 Kangebourne Rosie,	319 wne Rosie.
Born Live weight, in lbs. Last Calved Days since Calving	::::	::::	::::	::::	Dec. 10, 1920. $\begin{array}{cccccccccccccccccccccccccccccccccccc$	, 1920.	May 20, 1922. 878 Aug. 30. 50	, 1922. 8 30.	Nov. 24, 1920. 776 Oct. 4, 15	, 1920.	Oct. 4, 1921 906 June 14. 127	1921. 5 14.
Weight of Milk, 1st day Weight of Milk, 2nd day Total	ay	<b>:</b> : • <b>:</b>	::::	::::	Morn 18·0 17·7 35·7 17·85	Even 14.1 12.6 26.7 13.35	Morn 15·2 15·4 30·6 15·3	Even 13·5 13·7 27·2 13·6	Morn 13.9 8.9 22.8 11.4	Even 7.9 7.0 14.9 7.45	Morn 12.8 12.8 25.6	Even 11.1 9.4 20.5 10.25
Percentage Fat Composition of Solids of the Milk. Total S	Fat Solids other than Fat Total Solids	r thar	Fat	::::	4.38 9.12 13.50	5.95 8.97 14.92	4.36 9.62 13.98	6.37 9.31 15.68	4.28 8.96 13.24	6.20 8.76 14.96	4.44 8.32 12.76	5.30 8.02 13.32
Actual weight of Fat, in lbs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	in lbs. nultiply s other nultiply	y by 2 than y by 4 by 4	 20 Fat, in	:::Ibs.	0.785 15.70 1.64 6.56	$\begin{array}{c} 0.79 \\ 15.8 \\ \hline 1.19 \\ 4.76 \end{array}$	0.67 13.4 1.47 5.88	0.87 17.4 1.26 5.04	0.49 9.8 1.03 4.12	0.46 9.2 0.65 2.60	0.57 11.4 1.07 4.28	0 54 10 8 0.82 3 28
For time since Calving  For weight of Milk (lbs.)  Points { For weight of Fat (lbs. × 20)   For weight of Solids other than (lbs. × 4)	e Calvi Milk ( Fat (l Solids	ng Ibs.) bs. × other	 20) than F	Fat	12.0 31.2 31.5 11.3		1.0 28.9 30.8 10.9	008 0	18.9 19.0 6.7	9	8.7 23.1 22.2 7.6	
		Total Deduction Points ga	Total Deductions Points gained	:::	0.98		71.6	2 . 6	44.6	5 - 5	61.6 20.0 41.6	;
Remarks and Awards	:	:	:	-:-	Reserve and Highly Commended.	e and nly nded.	Highly Commended	hly ended.			Anatomic State Control of the Contro	The second secon

CLASS 22.—GUERNSEY COWS (Born After 18T August, 1920, and previous to 1st August, 1922)—Continued.	er ist August, 1	920, AND PREVIOU	is to 1sr August	, 1922)-Continued.	l
Number	321	32.2	323	324	
	Merland Lady Richmond	Hockley Ivy 2nd.	Calchill Chenful	Cheuton Fashion.	
		1001	1001 00 13	Oof 31 1991	
Born	Feb. 15, 1921.	Dec. 10, 1921.	April 20, 1921.	963	
Live weight, in lbs	1,034	27.8	7 000	Gont 96	
Last Calved	June 10.	Aug. 10.	June 23	07 adaci	
Days since Calving	131	2	67)		
	Morn Even	[	Ę	Ĕ.	
Weight of Milk, 1st day				22.6	
Weight of Milk, 2nd day	18.5 15.3	,			
Total	36.9 31.2	47.5 37.0	32.2 26.5	43.6 34.8	
ge	18.45 15.6	23.75 18.5	16-1 13-25	21.8 17.4	
Dononfore (Rat	4.77 7.67	4.39 4.63	A District		
~~ ;	-	8-69 8 91	9-15 8-65	9.11 9.15	
		13.08 13.54	13.80 14.72	13-14 13-36	
	0.88 1.20	1.04 0.86	0.75  0.81	0 945 0.73	
v 20	2	20.8 17.2	150 162	9.71 6.81	
A tree 1 model of the Califar attending the trailing		9.08	$1.48  ext{ } 1.15$	2.00 1.59	
Actual Weight of Souds other ban fat, in 193.		-		8.0 6.36	
Calculation of Points multiply by 4	-Antonomica		ī	The Park Street or other Persons	
(For time since Calving	9.1	3.0	s.,	1 00	
For weight of Milk (lbs.)	34.1	42.3	29.4	239.2	
Points \ For weight of Fat (lbs. × 20)	41.6	38.0	31.2	33.0	
			3	,	
(lbs, × 4)	126	14.9	10.5	14.4	
Total	97.4	68.5	78.9	87.1	
Deductions	1	1	1	1	
Points gained	97.4	98.2	6.87	87.1	
	2nd Prize.		SERVICE OF THE ARTICLE AND APPLICATIONS AND APPLICATIONS AND APPLICATIONS.		
Remarks and Awards	Reserve Stagenhoe Cun	1st Prize.	Highly Commended.	3rd Prize.	
	, magernico cap.		The second secon		

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1922) -	
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PREVIOUS TO	
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COWS	
22.—GUERNSEY	
LASS	

325 Cyrene's Clare,	July 22, 1921	Sept. 1.	84.8	g.			23.0 16.8		70.8 ±6.8		16.1 13.2		7 88 6.08	0.8	39.8	29.3	14.0	83.9		83.9	Highly Commended.
::	:	: :	:		: :	4	:	:	:	1	, 1		:	<u>ا</u> :	:	at:	:	:	:		:
Number	Born	Last Calved	Days since Calving	Weight of Milk, 1st day	Weight of Milk, 2nd day	Total	Average	_	Composition of $\langle$ Solids other than Fat	) for #a	y 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	( For time since Calving		Points $\langle$ For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat	(Ibs. × 4)	Total	Deductions	Points gained	Remarks and Awards

336 Rubella 2nd of Samma	Feb. 12, 1923. 770 Aug 30. 50	n Even 15.9 14.5 30.4	15.2	8 4.92 0 8.44 13.36	35		2 1.28 8 5.12	1.0 34.5 32.6 11.6	79.7 20.0 59.7	2rd Drize
Rabell	Feb	Morn 19.0 19.6 38.6	19-3	8:40 8:40	0.885	17.7	1.62			
330 Calchill Sall.	Jan. 13, 1923. 791 Aug. 26.	Even 13.8 14.3 28.1	14.05	5.84 8.78	0.82	16.4	1.24	နှစ်သိ ဝ် န	က္ ၂ က	9nd Prize
3; Calchi	Jan. 13, 791 Aug.	Morn 17.2 15.9	16.55	4.20 9.18	0.695	13.9	1.52	1.4 30.6 30.3 11.0	73·3	, Pu6
9 caceful	, 1923.	Even 15·6 16·3 31·9	15.95	5.40 9.42	980	17.2	1.51			9
329 Calchill Peaceful	Feb. 14, 1923. 888 July 23. 88	Morn 20 2 19.5	19.85	4.03 8.79	08.0	16.0	1.76	4.8 35.8 33.2 13.1	6.98	1st Drize
rincess	923.	Even 13.5 13.7	13.6	8.38 8.38	0.52	10.4	1.14			
327 Tregothum Princess Royal	Feb. 9, 1923. 906 May 17. 155	Morn 16.3 17.4 333.7	,,	3.75 8.37		1	I-41 5-64	11.5 30.5 23.0 10.2	75·2 20·0 55 2	
1 1	:::		: :	::	: :	:	lbs.	fat:		
; ;	:::	::	: :	Fat	: :	0	Fat, in	  20) than ]	Total Deductions Points gained	
::	::::	: ::	: :	Fat Solids other than Fat	enna 8	ply by 2	er than	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. × 4)	Total Deduc Points	
; ;	:::	lay day	: :	Fat Solids other	in Ib	multi	ds oth multi	of Mill of Fat of Soli		
::	ı lbs.	lk, 1st c lk, 2nd Total	Average	_	of Fat	Points	of Soli Points	For time since Calving For weight of Milk (lbs. For weight of Fat (lbs. For weight of Solids of. (lbs. × 4)	•	, and
::	ght, ir	of Mills	1 -4	ntage tion of filk.	reight	on of	eight on of	For ti For w For w (1bs		-
Number Name	Born I.ive weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day		Percentage Composition of the Milk	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs. Calculation of Points multiply by 4	Points {	•	D

CLASS 24.—JERSEY COWS (ENGLISH OR THAND BRED. ENTERED IN OR ELIGIBLE FOR THE HERD BOOK.

BORN ON OR PREVIOUS TO 1ST AUGUST, 1920).

341 Derry's Fairy	May 16, 1916.		36	9	18.0 18.0	17.8	35.8	6.71	5.29	69.6	14.98	0.945	18.9	1.73	6.93	1	0.04	42.1	15.3	PLOSING ALL MICOMINE	9 <b>7</b> -4		97.4	Highly Commended
Derry	May 1			M	199.9	22.0	44.2	22.1	5.25	9.47	14.72	1.16	23.5	2.10	<b>3.</b> 8		구 : 	242	19	TO CHARLES AN ARREST CO.			97	Comi
339 yes Sporran.	3, 1917.	13	010	2	Even	15.9	31.1	15.55	7.38	9.24	16.62	1.15	23.0	1-44	5.76	0	-	=	<del>1</del>	Charles Commission of the Comm	<b></b> 4 :	: : :	l	
339 Blue Hayes Sporran.	Dec. 16, 1917.	Feb. 12		7.	Morn 18.9		22.5	11.1	4.07	8.15	12.23	0.45	0.6	0.91	3.64	15.0	26.	95.0	7-6		80.1	10.0	70.1	
338 Blue Hayes Cat.	, 1919.	200			Even	# O:OI	20.4	10.2	5.92	9:35	15.51	09.0	12.0	0.95	3.8	5	-	63		H.	67		2	
338 Blue Haye	Mar. 13, 1919.	Tunn	261 191	07	Morn	13:1	25.8	12.9	5.46	86.8	14.41	().7]	14.2	1.16	4.64	9.5	23.1	26.	8.7		67.2	1	67.2	
7 Wandflower	1920.	ء ۔	.01	411	Even	3.4.5	49.8	6.47	4.89	8.71	13.60	1.92	24.4	2.17	89.8					,				rize.
Windlesham Windflower	Feb. 6, 1920.	ົ້າ	or ndec	91	Morn	0.96	53.1	26.55	3.00	8.92	11.92	08:0	16.0	2.37	9.48		51.5	40.4	c or	701	110.1		110.1	3rd Prize.
::	:	:	:	<u>-</u> '-		:	: :	:	-	:	:	•	.:	lbs.	:	•	:	: .	Fat	:	<u>'</u>	:	jg	<u>' :</u>
::	;	:	:	:		:	: :	:	:	Fat	:	:	::	at, in	:	:	:	() ()	than l	:	:	tions	gaine	÷
: :	:	:	:	:		:	: :	:	;	Solids other than Fat		:	by 20	han F	by 4	5.0	bs.)	×	ther	:	Total	Deductions	Points gained	:
• •	•	•	•	•		•	•	•		ther	olids	bs.	tiply	her t	liply	alvin	日当	t (1b	lids	•		-		•
::	:	:	፥	:	,	lay	uay	٥	Fat	lids c	Total Solids	in 1	mul	ds ot	mul	ice C	of Mi	of Fa	of So	:				:
::	: 5	ı nos.	:.	ving	,	r, 18t ( 7 9nd	Total	Average	E	~		of Fat	Points	of Soli	Points	For time since Calving	For weight of Milk (lbs.)	For weight of Fat (lbs. $\times$ 20)	For weight of Solids other than Fat	(103. × 4)				Award
::		tnt, m	ed ?	se Cal				7	face	iono	ilk.	eight	on of	eight	on of	For t	For v	Forv	For v					and .
Number Name	Born	Live weight, in lbs.	Last Calved	Days since Calving		Weight of Milk, 1st day	reight o		Percentage	Composition of	the Milk.	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4			Points 4		ر				Remarks and Awards

	CLASS 24.—JERSEY COWS (ENGLISH OR ISLAND BRED.	OWS (	ENGL	SH OR	Ist	AND BRE		N ON OR	PREVIOUS	TO 1ST	AUGUST,	Born on or previous to 1st August, 1920)—Continued	ontinued.	1
		:	į	:	:	342		343	60	e e	344	349	G	
	Name	:	:	:	:	Frostie 4th.	4th.	Miranda's Lass	s Laws	Pin	Phonette	Eastfield Lady.	Ladv.	
	I					-	(	;	9		0001	0101 2 7010	0101	
		:	:	:	:	Aug. 26, 1918.	1918.	Nov. o, 1919.	1919.	o madv	April o, 1920.	1 018	1010. G	
,	, in Ibs.	:	:	:	:	625		æ'	×,	, 200 M	0	10,1	<b>-</b>	
	-	:	:	:	:	April 5.	· .	March 10.	. jo	May 2	May 19.	oan. 4.	÷,	
	Days since Calving .	:	:	:	:	197		223	3	CT	ç	007		
						Morn	Even	Morn	Even	Morn	Even	Morn	Even	
	Weight of Milk. 1st day			:	-:	22.1	18.3	20.9	15.4	24.0	17.2	10.6	9.6	
	Weight of Milk, 2nd day		: :	:	:	21.8	18.4	20.5	16.0	55.0	20.3	0.1	8.5	
	Total		;	:	:	43.9	36.7	41.1	31.4	0.95	37.5	19-7	17.8	
	e e			:	-	21.95	18.35	20.55	15.7	23.0	18.75	9.85	8.9	
	Donoute a (Tot				1	4.30	5.94	5.16	69.9	6.35	6.14	6.37 €	5.58	
	~~ +	Solids other than Fat	than	Fat		8.57	8.90	8.44	8.75	8.81	8.94	9.01	90.6	
	ـــ	Total Solids		:	:	12.96	14.84	13.60	14.44	15.16	15.08	15.38	14.64	
	Actual weight of Fat. in lbs.	. Ibs.		:		96.0	1.09	90-1	68.0	1.46	1.15	0.63	0.50	
	Calculation of Points multiply by 20	ultiply	by 20		<u> </u>	19.2	21.8	21.2	17.8	29.2	23.0	12.6	10.01	
	Actual weight of Solids other than Fat. in Ibs.	other t	han F	at. in ]	ps.	1.88	1.63	1.74	1.37	2.03	1.68	0.89	0.805	
	Calculation of Points multiply by 4	ultiply	by 4		\	7.52	6.52	96-9	5.48	8.12	6.72	3.56	3.22	
		7 -	· ;		(4	0.01	THE PERSON NAMED IN	19.0		ACHIEV CONTRACTOR OF THE	6	12.0		
	For unight of Mills (lbs)	Meily and	- PE 20	:	:	40.3		36.5	~~	41.8	, oo	18.8		
	Points \ For weight of Fat (lbs. × 20)	Fat (1b)	, x ×	: (c)	: :	41.0		39.0		52.2	61	25.		
	For weight of Solids other than Fat	Solids o	ther t	han F	at	,		ŗ		,	G	8.8	0	
	(lbs. × 4)			:	:	14.0		12.4	٠	0.7-1	0			
		_	<b>Fotal</b>	:	-:	107.3		69.7	_	120.1	<u>—</u>	60.2	~	
		Н	Deductions	ions	:	1		10.0		1	-		-	
		7	oints	Points gained	ا : ا	107.3		89.7	7	120.1	1	60.2	7	
	Remarks and Awards		:	:	` <u>:</u>	Highly	ly.			lst ]	1st Prize.			
					-	Commended	nded.							i

JUST, 1920) Continued	353	ney. Dumlea's Fontaine.	Dec.	926	Aug. 8.	23		55.4		46.3	.3 23.15 19.6	4.87	9.02 9.13 8.92	[4·16   14·00   14·84		.0 22.6 23.2	2.12	8-14 8-48 7-0	3.2	42.8	45.8		OCT	107-3	Service Control of the  107:3	Highly Commended.	
rs To Ist Auc	352	Taly of the Valley.	Oct. 26, 1917.	866	Oct. 2.	7.7	Morn Ev	27.9 23.8		54.3 46.6	27.15 23.3	3.56 5	8.84 9	12.40 14	1	19.4 24.0	2.40 2	9-6		50.5	43.4	001	0.01	111.9		111.9	2nd Prize.
IN ON OR PREVIOU	351	Dewbeny.	April 7, 1920.	912	July 10.	101	Morn Even		26.0 19.3	50.1 36.2	25.05 18.1	5.35 4.53		14.04 13.54	1.34 0.82	26.8 16.4	2.17   1.64	8 68 6.56	6.1	.43-2	43.2	i i	2.01	107.7		107.7	Reservo and Highly Commended.
LAND BRED-BOR	350	Lady Vedas 6th	Aug. 11, 1918.	974	Aug. 29.	51	Morn Even	_		44.7 35.1	22:35 17.55	5.52   4.29		14.36 12.84	1.24 0.755	24.8 15.1	1.98   1.50	7.92 6.0	1.1	39.9	39.9	9	13.9	94.8	-	94.8	Higbly Commended.
Class 24,-JERSEY COWS (English or Island Bred-Born on or previous to 1st August, 1920) -Continued			Born	weight in the		Days since Calving	)	Weight of Milk 1st day	: :	: :		Downsham (Rat	~~ ₩		Actual weight of Rat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	(For time since Calving	For weight of Milk (lbs.)	Points \ For weight of Fat (lbs. × 20)		(1bs. × 4)	Total	Deductions	Points gained	Remarks and Awards

ENTERED IN OR ELIGIBLE FOR THE HERD BOOK.	r August, 1930, and previous to by August 1959)
	1990, and pres
(Exelis	Born after 1st August.
CLASS 25.—JERSEY COWS—	<b>A</b>

		3rd.	30.	-	-		ne	 on	9	-4	.ev	78	8.92	70	0 82	, <del>\</del>	1.27	5.08									1
i	:.58	er Flo	Aug. 30, 1920.	805	April 12.	1801	Even	14.8	13.6	28.4	14.2	5.5	8	14.70	0	16.4	1.5	5.	12.0	32.6	9 /		11.8	0.40	I	0.40	Highly Commended.
	٠.	Rememl er Flo 3rd,	Ang.	••	Apr		Morn	18.8	0.81	36.8	18.4	5.80	9.10	14 90	1 06	21.2	1.67	89-9	15	ñ	က	i	_	6		6	Com
			 30				Even	163	16.7	33.0	16.5	60.9	9.21	15.30	1.00	20.0	1.53	6.12	Name and Address of the Owner, where the Owner, which is the Owner, which								
1	257	r's Star	Oct. 5, 1920	926	April 10.	192	-	10	16		9	9	G		1	20	NATIONAL PARTY.	9	0.5	37.6	7.8	:	14.5	111.9	1	111.9	lst Prize.
The transfer of the transfer o	••	Roberta's Star 2nd.	Oct.		AL		Morn	20.8	21.4	45.5	21.1	6.54	9.94	16 48	1.39	27.8	2.10	8.4		೯	77		_	П		11	lst
: -		ïel.	921.				Even	21.9	24.4	46.3	23.15	3.35	8.61	11.96	0.775	15.5	2 00	8.00					-				Şe
	356	Tidy Mahel.	Sept. 2, 1921.	934	Aug. 24	56						1				-	-		9.1	47.8	39.0	1	17.3	105.7		105.7	2nd Prize.
		Ē.	Sept		₹	,	Morn	24.3	25.1	49.3	24.65	4.74	9.42	14.16	1.175	23.5	2.33	9.32	The second second					1		]	2n
		thitton	921.				Even	6.9	0.8	34.9	17-45	3.28	8.94	12.22	0.575	11.5	1.57	6.28			-		-				led.
	354	y Prch	Jan. 16, 1921.	941	Sept. 15.	37	្ត	_	_						and the state of t					38.4	24.4		13.5	29.3	I	76.3	Highly Commended,
		Danbury Prchibition	Jan.		ď	1	Morn	21.0	20.8	41.8	20.9	3.07	8.67	11.74	0.645	12.9	181	7.24									G. J
	:	:	:	:	:	:		:	:	:	÷	:	:	:	:	:	n lbs.	:	:	:	:	Fat	:	:		ned	:
1	:	÷	÷	:	:	:		:	:	:	:	:	n Fat	:	:	20	Fat, i	:	:	:	20)	r than	:	rotal	Deductions	Points gained	፥
	:	:	:	:	:	:		:	:	:	:	:	Solids other than Fat	sp	:	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	ly by	ing	(lbs.)	For weight of Fat (lbs. $\times$ 20)	For weight of Solids other than	:	Tota	Dedu	Poin	÷
	:	:	:	:	:	:		V.	3.y	:	:	:	ls oth	Total Solids	in Ibs.	aultip	other	aultip	e Calv	Milk	Fat (	Solids	:				i
	:	:	:,	ps.	:	ng		Weight of Milk, 1st day	Weight of Milk, 2nd day	tal	Average	(Fat	Solic	$\Gamma$ otr	Actual weight of Fat, in lbs	oints r	Solida	Calculation of Points multiply by	For time since Calving	For weight of Milk (lbs.)	ght of	ght of					/ards
	•	•	•	s, in l		Calvi:		filk,	filk,	Total	Av	ge	of.	ı,	ht of	of Pc	ht of	of Pc	r tim	r wei	r wei	r wei	(Ibs. $\times$ 4)				ıd Aw
	er	÷	:	veigh	alvec	since		t of I	t of I			Percentage	ositio	the Milk.	l weig	ation	l weig	ation	$\mathbb{F}$	_	~	=	ر				ks ar
T. COMMISSION OF THE PERSON OF	Number .	Name	Born	Live weight, in lbs.	Last Calved	Days since Calving		Weigh	Weigh			Per	Composition of	ţþ(	Actua	Calcul	Actua	Calcul			Points						Remarks and Awards
1		•	13 0		11	7	•	. 1					_		7	_	٦	_									r=4

Class 25.—JERSEY COWS—(English or Island Bred—Born after 1st August, 1920, and previous to 1st August, 1922)—Computed.

		4	-	The state of the s	-	The second second second	the second control of the second seco						
Number	:	:	:	:	:	359	6	361		362	ભ	396	9
Name	:	:	:	፥	-: '	Symbol	Tox	Moss Rosebud,	sebud.	Philandia.	ndıa.	Essence Pride,	Pride.
Born		:	:	:	:	June 3, 1921.	1921.	July 23, 1921.	, 1921.	Nov. 20, 1921.	, 1921.	Jan. 8, 1922.	1922.
Live weight, in lbs.		:	:	:	:	855	73	208	82	828	6	854	<del>-1</del> 1,
t Calved		:	:	:	:	Sept. 23.	23.	Sept. 6,	<b>.</b>	May 10.	.0.	May 5.	i c
Days since Calving		:	:	:	:	56		4		791	7	1	16
						Morn	Even	Morn	Even	Morn	Even	Morn	Even
oht of Mil	Weight of Milk. 1st day		:	:	:	14.5	14.0	19.6	14.8	18.8	14.7	18.2	17.6
Weight of Milk, 2nd day	lk, 2nd da	, Þ.	:	:	:	17.8	14.5	17.1	14.2	17.7	13.6	18.4	15.8
0	Total	. :	:	:	:	32.3	28.5	36.7	29.0	36.5	28.3	9.98	33.4
	á	:	:	:	:	16.15	14.25	18.35	14.5	18.25	14.15	18.3	16.7
Pareantaga	C Trat.			:	1	6.76	6.39	4.75	4.85	4.69	98.9	4.87	7.08
Composition of	~	Solids other than Fat	r that	1 Fat		9.04	8.53	8.91	8.93	60.6	8.86	9.63	8.98
the Milk.		Total Solids	S.	:	:	15.80	14.92	13.66	13.78	13.78	15.72	14.50	90-91
Actual weight of Flat. in lbs.	t of Fat. i	n Ibs.	:	:	1-	1.09	0.915	0.87	0.700	0.86	0.97	0.89	1.18
ulation of	Calculation of Points multiply by 20	ultipl	y by 5	30	:	21.8	18.3	17.4	14.0	17.2	19.4	17.8	23.6
al weight	Actual weight of Solids other than Flat, in lbs.	other	than	Fat, in	lbs.	1.46	1.22	1.63	1.29	1.66	1.25	1.76	1.49
ulation of	Calculation of Points multiply by 4	ultipl	y by	` : :	1:	5.84	4.88	6.52	5.16	6.64	5.0	7.04	5.96
For	For time since Calving	Calvi	āu	:	1	The contraction of the	Allocation and the second	0.3	3	12.	)	12.0	
For	weight of	Milk (	(Ibs.)	:	:	30.4		32.	6	32.4	<del>-</del>	35.	•
Points \ For	For weight of Fat (lbs. × 20)	Fat (1	bs. X	20)	:	40.1		31.4	#	36.	:0	41.4	
_	For weight of Solids other than Fat	Solids	other	than I	at							S	
Ξ _	(lbs, $\times$ 4)	:	:	:	:	10.7		11.7		11.6		13.0	
,	•		Total	:	:	81.2	~	76.3	8	92.6		101.4	
			Dedu	Deductions	:	ł	1	1		1	1	]	-
			Point	Points gained	g	81.2	~	76.3	3	95.6		101.4	<b>†</b> -
aerks and	Remarks and Awards	:	:	:	:	Highly	hly	Highly	hly	Highly Commended.	aly proded.	3rd Prize.	rize.
A. S. Simplement September 197, Sp. 74						COTTO	, income				1	1 1	

CLASS 25 -- JERSEY COWS-(English or Island Bred. Born after 1st August, 1920, and Previous to 1st August, 1922)-Continued.

														-				-			
371 Postmistress	Jan. 23, 1922. 936	Jan. 19.	Z/3	14.0	31.0	15.5	5.22	9.18	14 40	0.82	16∙4	1.43	5.72	0	ç,	á	ଚ୍ଚ	L	1	7	Reserve and Highly Commended.
3 Postm	Jan. 25	Jan	Mount	21.1	40.8	20.4	5.17	9.19	,14·36	1.06	21.2	1.88	7.52	12.0	35.9	37.6	13.2	2.86	_	2.86	Reserve and Highly Commended.
369 Zaffarine,	June 9, 1921. 1,002	Aug. 25.	From	19.5	38-0	19-0	5.23	8-99	14.22	1.00	20.0	1.71	₹8•9	5	စ္	<del>o</del>	ė	1.	1	7	Highly Commended
Zaffa	June 9	Aug	Morn	20.5	41.9	20.6	5.11	9.41	14.52	1.05	21.0	1.94	7.76		39.6	41.0	14.6	2.96	1	2.96	Hig
7 d's Freda	April 4, 1921. 840	July 15.	90 Fyon	14.9	13.3 28.5	14.1	7.17	9-59	16.76	1.01	20.5	135	5.4	5.6	Ç,	ù	11.8	9.	1	9.	Highly Commended.
367 Crystal Cid's Freda	April 4	Jul	Monn	18.0	25.7	17.85	3.65	8.99	12.64	0.65	13.0	1.60	6.4	ũ	35.0	 	11	82.6	1	82.6	Hig Comm
						1	1	1	- 1			1	1	1				1		}	ı
::	: :	:	:	:	: ;	<del>'</del> :	:	:	:	:	:	lbs.	:	<u>:</u>	:	Fat	:	:	:	ed	:
::	: :	:	:	:	: :	:	:	n Fat	:	:	:	Fat, in lbs.	4	:	:	z0) r than Fat	:	: ::		ts gained	:
	: :	:	:	•	: :		:	ner than Fat	82	:	:	er than Fat, in lbs.	oly by 4	ving suiv	(lbs.)	(1bs. $\times$ 20) Is other than Fat	:	Total	Deductions	Points gained	3
: :	: :	:		:	:	: :	: :: :: :: :: :: :: :: :: :: :: :: :: :	lids other than Fat	82	", in lbs sdl ni	:	ds other than Fat, in Ibs.	multiply by 4	nce Calving	of Milk (Ibs.)	of Fat (Ibs. $\times$ 20) of Solids other than Fat	(	Total		Points gained	:
::		:	:	:	:	ega	_	~-	82	of Fat, in lbs	:	of Solids other than Fat, in lbs.	Points multiply by 4	sime since Calving	weight of Milk (lbs.)	weight of Fat (lbs. $\times$ 20) weight of Solids other than Fat	s. × 4)	Total		Points gained	:
::	::	:	:	:	: :	ega	_	بر مرا	82	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For time since Calving	For weight of Milk (lbs.)	Foints $\langle$ For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat	(lbs. × 4)	Total		Points gained	3

CLASS 26.—JERSEY HEIFERS—(English or Island Bred. ov or after Ist	IFERS-	-(Engl	SH 01	OR OR AFTER IST AUGUST, 1922).	ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. AUGUST, 1922).	IN OR E 1922).	LIGIBLE F	юк тнв	Нвво Вс	OOK. BORN
Number	:	:	- :	373	378	•	379	e	381	1
Name	:	:	:	Doreen.	Origa's Velva.	Velva.	Kingston Princess Aldan	reess Aldan	Pavlova	lova.
í				Mar A 1993	May 18 1923	1093	Mary 94	Inly 94, 1923.	Any. 5	Aug. 5, 1922.
-	:		:		706	9	77	612	0	2007
Live weight, in los.	:	:	:	More 9	ΔΔ	10	ΔΔ	36	Ami	April 99
Last Calved  Days since Calving	: :	: :	: :	169 169	65 19.		20 E	52 52	1	173
				Morn Even	Morn	Even	Morn	Even	Morn	Even
Words of Will let day				16.8	16.5	11.9	15.2	14.7	17.3	12.3
Weight of Milk 2nd day	. :	: :		17.9	16.4	12.8	14.9	15.0	14.7	12.7
Total			;		32.9	24.7	30.1	29.7	32.0	25.0
g			:	17.35 13.35	16.45	12.35	15.05	14.85	16.0	12.5
Donoctona (Rot				5.87 6.20	5.70	5.39	2.96	4.53	5.70	7.80
~ +	s other 1	Solids other than Fat	: :		96-6	9.37	9.62	8.99	9.56	9.40
ں	Total Solids	:	:		15.66	14.76	12.58	13 52	15.26	17.20
Actual weight of Fat, in 1bs	n Ibs	:	:	1.02 0.83	0.94	0.665	0.445	0.67	0.93	30.08
Calculation of Points multiply by 20	ultiply	by 20	:	20.4 16.6	18.8	13.3	6.8	13.4	18.6	19.6
Actual weight of Solids other than Fat, in lbs.	other th	an Fat,	in lbs.	1.65   1.26	1.64	1.16	1.45	1.34	1.53	1.17
Calculation of Points multiply by 4	ultiply	by 4	:	6.6 5.04	6.56	4.64	5.8	5.36	6.12	4.68
(For time since	Calving	:	:	12.0	2.		ŀ	12	12.0	0
For weight of Milk (lbs.)	Milk (1b	8.)	:	30.7	28.8	~	29 9	6	28.5	5
Points \ For weight of Fat (lbs. × 20)	Fat (lbs	× 20)	:	37.0	32.1	_	25.	62	38.3	c)
For weight of	Solids o	ther than	. Fat	:	-		0.11	-	10.0	0
(10s. × 4)	-	:	:		7.11	2	. 1 1	7	.01	0
	H	Total	:	91.3	74-6		64.6	9 :	89.5	ē.
	7	Deductions			-		0.01		1	
	Д	Points gained	ned	91.3	74.6	ro.	54.6	9	89.5	5
Remarks and Awards		:	:	1st Prize.	Reserve and Highly Commended.	ighly ended.			2nd I	2nd Prize.

ntinned.	388 Olombier Eminence,	May 12, 1923. 708 Oct. 4.	Even 11.8 11.9 23.7	4.92 9 40 14.32	0.585	1.12 4.48	25·3 22·0 9·8	57.1	
BORN ON OR AFFER 1ST AUGUST, 1922) - Centinued.	388 Colombier E	May 15 76 Oct	Morn 13.3 13.5 26.8 13.4	3.84 9.86 13.70	0·515 10·3	1.32 6.28	1 23 23	5.	
Argust,	385 Frostie May.	May 20, 1923. 735 July 5. 106	Even 10.2 9.0 19.2 9.6	5·72 9·56 15·28	0.55	0.915 3.66	6·6 19·6 19·0 7·4	52·6 52·6	
Ter 1st	Froeff	May 20	Morn 11.2 8.7 19.9 9.95	4·10 9·38 13·48	0·40 8·0	0.935 3.74		0 ' 0	
ON OR AF	384 Helena's Lass.	April 29, 1923. 784 Sept. 10. 39	Even 13·4 12·4 25·8 12·9	4.90 8.64 13.54	0·63 12·6	1.12	27·1 22·5 9·7	59·3 59·3	
	g Helena	April 29, 784 Sept. 39	Morn 13.5 14.9 28.4 14.2	3.48 9.28 12.76	0.495 9.9	1·31 5·24	20.60	5.	
CLASS 26.—JERSEY HEIFERS (ENGLISH'QR ISLAND BRED.	382 Martingold.	June 15, 1923. 801 Sept. 12.	Even 16.0 17.2 33.2 16.6	6.46 9.10 15.56	1.07	1.51	35·3 38·2 13·0	86.5  86.5	3rd Prize,
or Islan		700	Morn 19.0 18.3 37.3 18.65	4.48 9.28 13.76		$\begin{array}{c} 1.73 \\ 6.92 \end{array}$	38 33		3rd I
LISH	::	::::	• • • • • •	: : :	: :	l lbs.	Fat	pa	:
(ENG	: :	· :::::	::::	Fat	: :	at, ir 	 20) Ehan	tions gain	:
RS	: :	: : : :	::::	Fat Solids other than Fat Total Solids	Actual weight of Fat, in lbs Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs. Calculation of Points multiply by 4	For time since Calving  For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. × 4)	Total Deductions Points gained	:
EIFI	• •			ther olids	bs tiply	her t	alvin ilk (II ut (Ib) lids o		•
Y H	: :		day day 	Fat Solids other Total Solids	t, in l s mul	ids ot s mul	of Me of So of So of So 4)		: ¤2
RSE	::	iis.	Weight of Milk, 1st day Weight of Milk, 2nd day Total Average	<u></u>	Actual weight of Fat, in lbs. Calculation of Points multipl	of Sol Point	For time since Calving For weight of Milk (lbs.) For weight of Fat (lbs.) For weight of Solids oth (lbs. × 4)		Remarks and Awards
F	: :	Born Live weight, in lbs. Last Calved Days sings Calving	Milk Milk T	Percentage Composition of the Milk,	ight n of ]	ight on of 1	For ti	•	nd A
ss 26	Ţ.	weig] Calve	ght of ght of	Percentage mposition o the Milk,	al we alatio	al we ılatio		,	arks a
CLA	Numbe Name	Born Live Last Days	Weig Weig	Com.	Actu Calcu	Actu Calcu	Points		Rem
London									

22)—Continued.																											
R lsr Augusr, 193	391	Last of the Dancs and	i i	June 5, 1923.	1.19	June 22.	119	u	15.4 11.4	15 0 12.5	30.4 23.9	15.2 11.95	THE STREET, SHARE STREET,	9.33 9.43	13.66 14.24	0.66  0.575	13.2   11.5	1.41 1.12	5.64 4.48	7.9	27.2	24.7	10.1	6 69	1	6.69	Highly Commended.
BORN ON OR AFTER 1ST AUGUST, 1922)-Continued.	380	Benedicite.	000	Mar.		Sel	53	Morn Even		9.4 7.5	18.5 16.4	9.25 8.2	6.60 9.33	10.01 99.6	16.26 19.34	0.61 0.77	12.2 15.4	0.895 0.82	3.58 3.28	Of this bill the second control of the secon	17.5	9.1.2	6.9	52.0	ļ	52.0	
CLASS 26,-JERSEY HEIFERS (ENGLISH OR ISLAND BRED.	Number		f	• • • • • • • • • • • • • • • • • • • •	TAVE WEIGHT, III IDS	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day	Total	Average	Percentage (Fat	ۍر کا	the Milk. (Total Solids	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For time since Calving		Foints \ for weight of fiat (10s. × 20)	$(1bs, \times 4) \dots \dots \dots$	Total	Deductions	Points gained	Remarks and Awards

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27.—KERRY
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398	Wadlands Fanny.	Sept. 21, 1920.	965		Oct. 4.	10		21.3	21.1	42.4	21.2	3.59	0.01	12.60	0.76	15.2	1.92	7.68		15.8	36.0	16.7	98.5	1	98.5	Reserve and Highly
	Ę	Sept.	1		<u>ٽ</u>		Morn	24.1	25.1	49.2	54.6	4.22	9.18	13.40	1.04	20.8	2.26	9.04		7	∰ 	1	6		6	Rese H
397	Valencia Eileen 3rd.	Mar. 14, 1916.	955	2	6.	9	Even	17.4	17.2	34.6	17.3	9†-†	80.6	13.54	0.77	15.4	1.57	6.28	0	œ	o o	**	7	1	2	High.'y
36	Valencia 1	Mar, 14	ò	,	May 6.	=	Morn	20.7	25.3	43.0	21.5	3.38	0F-6	12.78	0.73	9-7-1	2.03	8.12	12.0	38.8	30.0	14.4	95.2	1	95.2	High.y
396	Coquet Gipsy.	May 12, 1917.	1056	2	Sept. 9.	40	Even	36-1	29.7	59.8	29.6	4.24	9.18	13.42	1.27	25.4	2.75	11.0		_	ά	က္	9	o	9	2nd Prize. Reserve Kerry
en	Coquet	May 15	) [	7,1	Sep	<del>च</del> ा ।	Morn	36.0	34.4	70.1	35.2	2.66	9.42	12.08	16.0	18.8	3.33	13.32	_	65.1	44.2	24.3	133.6	10.0	123.6	2nd ]
394	Peace 2nd.	1661		#	10.	Ć.	Even	27·4	25.8	53.2	26.6	80.9	9.02	15.10	1.62	32.4	2.40	9.6		m	m		2	1	2	rize. Lilk Cup.
š	Buckland Peace 2nd	May 98, 1991	60	c S	Sept. 10.	30	Morn	29.0	31.3	60.3	30.15	4.05	9.17	13.22	1.22	24.4	2.76	11.04		56.8	56.8	20.6	134.2	l	134.2	1st Prize. National Milk Cup. Korry Cattle
:	:	:		:	:	:		;	:	:	:	:	:	:	:	:	a lbs.	:	:	:	:+:	: :	:		ed	:
:	፧	:		:	:	:		:	:	:	:	;	ın Fat	:	:	20	ı Fat, i	<b>4</b>	:	:	< 20)		Total	Deductions	Points gained	:
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:	፧	:	in Iba	277 777	:.	alving		ilk, 1st	ilk, 2nd	Total	Average		~		it of Fat	of Points	it of Sol	of Points	For time since Calving	For weight of Milk (lbs.)	For weight of Fat (lbs. $\times$ 20)  For weight of Solids other than $R_{24}$	(lbs. $\times 4$ )				} Award
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406 Buckluist Blfin.	for 1915	847	Sept. 1.	48	Even	21 S	21.3	£9.7	4.32	9:03	13.37	0.935	18.7	1.95	7.8	8.0	4	36.3	Ģ			-1	3rd Prize.
	l .	8	Se.	· च	Morn	25.0	7.17	26.8	3.28	9.10	12.38	98.0	17.6	2.44	9.76	0	18.4	9g 	17.6	103.1	,	103-1	3rd
405 v High Kiek	0:61		10.	65	Even	9:25	91.9	31.5 15.65	4.34	9.80	13.20	89-0	13.6	1.39	5.56	3	7	-1	+		1	1	hly ended.
399 405 Yaddy Mournemore, Haffingley Hydl Kiek	61	912	May 19.	=	Morn	187	1.06	19.05	3.96	8.97	12.88	0.755	15.1	1.70	8.9	11.3	2-7-3	28.7	12.4	87.1	i	87.1	Highly Commended.
(g)	1918		Oct. 3.		Even	19:5	2.7.1	18.2	8.12	9.10	17.22	1.48	29.6	99.1	6.64	months and a contract of the	.0		60	6		6	hly nded.
399 Vaddy Mour	April 11 1018	. 026 	Oct	16	Morn	13:	18.7	18.4	4.99	9.01	14.00	0.92	18.4	1 66	6.64	ALANGARAN MARKANAN M	36.6	48.0	13.3	97.9	-	6.76	Highly Commended.
-::		: :	:	:		:	:	: :	:	:	:	:	:	lbs.	:	:	:	:	: ar	:	:		:
: :	•	: :	:	:		:	:	: :	:	n Fat	:	÷	20	Fat, in	4	:	:	20)		:	Deductions	Points gained	:
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: :		: :	:	:	,	day	day	oz	Fat	Solids other than Fat	Total Solids	t, in lb	s multi	ids oth	s multi	nce Cal	of Mill	of Fat	(3				:
: :		in lbs.	:	alving		ilk, lst	uk, zna Totol	Average	e (F	$\gamma$		t of Fa	of Point	t of So	of Point	For time since Calving	For weight of Milk (Ibs.)	For weight of Fat (lbs. $\times$ 20)	(lbs. × 4)				l Award
Number		Live weight, in lbs.	Last Calved	Days since Calving		Weight of Milk, 1st day	Weignt of Muk, 2nd day		Percentage	Composition	the Milk.	Actual weight of Fat, in Ibs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by	f For	_	·	5	,			Remarks and Awards
Numb Name	F 0	Ĕ	Las	Day		٠ ا ﴿	ž Š		P	Con		Act	$C_{a}$	Act	Calc			Points					$\mathbf{Ren}$

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414	Castlelongh Missie.	May 1, 1923	678	Aug. 16.	-44	Even	12.4	13.6	26.0	13.0	4.81	9.53	14.34	0.625	12.5	1.24	4.96	2.4	6	<u>۔</u>			က္	1	÷.	
4	Castlelon	May 1	67	Ang	9	Morn	15.8	16.0	31.8	15.9	4.50	9.72	14.22	0.72	14.4	1.245	6.18	2	28.9	50.	,	II	69.3		69.3	
413	Hattingley Beauty.	Jan. 21, 1923.	9	June 19.	122	Even	13.3	13.5	26.5	13.25	4.48	10·17	13.92	0.595	11.90	1.25	5.0	2	G	6	(	9	9		9	
<del>-1</del> 1	Hattingle	Jan. 2]	736	June	,	Morn	14.3	15.0	29.3	14.65	3.42	9.52	12.94	0.50	10.0	1.40	5.6	8.2	27.9	21.	,	10.6	9.89	1	9.89	
80	Emma,	., 1923,	9	18.	^7	Even	14.0	14.4	29.3	14.65	5.08	0.10	14.18	0.74	14.8	1.33	5.32	2	~	~			~1		3	
408	Buckland Emma,	April 24, 1923.	796	Aug. 18.	9	Morn	15.8	16.4	32.2	16.1	3.10	9.48	12.58	0.50	10.0	1.53	6.12	2.2	80.8	24.	,	11.4	69.2	ļ	69.2	
:	:	:	:	:	:		:	:	:	:	:	:	:	:	:	lbs.	:	:	: :	:	Fat	:	:	:	ed	•
:	:	:	:	:	:		:	:	:	:	÷	n Fat	:	:	20	Fat, in	.:	:	:	20)	r than	፥	::	Deductions	Points gained	
፧	:	:	:	:	:		:	:	:	:	:	er tha	ils	:	ly by ?	than	ly by	ing	(1bs.)	lbs. ×	s other	:	Total	Dedu	Poin	
:	:	:	:	:	:		a.y	day	:	:	Fat	Solids other than Fat	Total Solids	in lbs.	multip	ls other	multip	ce Calv	of Milk	of Fat (	f Solid	:				
:	፧	:	in Ibs	:	alving		lk, lst d	ilk, 2nd	Total	Average	_	$\sim$	(To	t of Fat,	f Points	t of Solic	f Points	For time since Calving	For weight of Milk (lbs.)	weight (	For weight of Solids other than Fat	(lbs. $\times$ 4)				
Number	Name	Born	Live weight, in Ibs	Last Calved	Days since Calving		Weight of Milk, 1st day	Weight of Milk, 2nd day			Percentage	Composition of	the Milk.	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs.	Calculation of Points multiply by 4	For	_	Points \ For	For	ت ب				

CLASS 29, -DEXTER COWS (ENTERED IN OR ELIGIBLE FOR THE HEED BOOK).

Number	:	:	:		418	450	0	<del>11</del>	421
Name	:	:	:	Barrow Bee 6th.	Bee 6th.	Bridesmaid	maid	Just Pound of Hookstile	f Hookstile
Born	:	:	:	June	, 1921.	1913.	3.	Mar. 15, 1919.	, 1919.
Live weight, in lbs.	::	÷	:		674	794	4	908	⊋ ;
Last Calved	:	:	:		May 23.	May 5.	5.	Sept	Sept. 10.
Days since Calving	:	:	:	í	149	16		 	
				Morn	Even	Morn	Even	Morn	Even
Weight of Milk, 1st day	st day	:	:	14.3	12.0	16.3	13.8	25.5	55.6
Weight of Milk, 2nd day	nd day	:	:	14.9	11.9	17.9	13.9	28 3	21.8
Total		:	:	29.5	23.9	34.2	27.7	53.8	7.1
Ave	Average	:	:	9.41	11.95	17.1	13.85	26.9	22.5
Percentage	Fat	;	:	4.12	4.42	4.30	4.29	2.89	3:30
ř.	Solids other than Fat	er than	Fat	8.84	8 62	8.80	9.17	8.61	8.70
	Total Solids	Js	:	12.96	13.04	13.10	13.46	11.50	12.00
Actual weight of Fat, in lbs	Fat, in lbs.	:	:	090	0.53	0 735	0.595	0.78	0.735
Calculation of Points multiply by 20	nts multip	ly by 2		12.0	9.01	14.7	11.9	15.6	14.7
Actual weight of Solids other than Fat, in lbs.	folids other	than I	at, in lbs	1.29	1.03	1.51	1.27	2:32	1:94
Calculation of Points multiply by	nts multip	ly by 4	:	5.16	4.12	70·9	5.08	9:58	7.76
(For time	For time since Calving	ing	:	6.01	6	12.0			
For weigh	ht of Milk	(1bs.)	:	26.6	9	31.0	_	57	1 64
Points   For weig	For weight of Fat (lbs. × 20)	ibs. X	(02	22 6	9	26 6	~	훘	æ €::
For weig	For weight of Solids other than Fat	other	than Fat	(		,	_	ľ	5
(15a,	(153, X 4)	:	:			Ξ		7	0.71
		Total	:	F-69	-	80.7		<b>S</b>	964
		Deductions	tions	1	1		,	2	0 01
		Points	Points gained	T-69	-	80.7		æ	86.4
Remarks and Awards	rols		,			2nd Prize. Reserve Nutt	rize.	lst ]	lst Prize.
		:	:			(Jun)	-	Nutt	Nutt. Cup.

CLASS 31,—COWS OF ANY BREED—MILKED THREE TIMES DAILY.

									_
Number	:	156			427			428	
Name	:	Terling Sky 8th		Ba	Baswick Bloom	ш	Lar	Earbourne Octavia,	Ma.
Born	:	Jan 23, 1916.	.9	Ap	April 13, 1918.	.81		1918.	
		1,558		•	1.296			1,434	
•	:	Sept. 23		92	Sept. 26.			Sept. 7.	
: :	:	26			23		1	45	1
	Morn	1	Even.	Morn.	Aftın.	Even.	Morn.	Aftıı.	Even.
Weight of Milk, 1st day	21.3		20.4	32.5	25.3	24.1	22.1	29.6	20.1
	22.7		18.2	28.0	55.0	20.7	26.3	24.5	54·0
Total	44.0	49.8	38.6	60.5	47.9	44.8	48.7	54.5	14.7
og	22.0	24.9	19.3	30.25	23.95	55.4	24.35	27.25	22.35
Percentage ( Fat	2.71	4.16	5.25	2.05	2.78	4.13	2.03	4.47	4-72
~ #	9-31	8.84	8.53	8.93	8.80	8.91	9-45	6·13	9-10
	12.02	13.00	13.78	10.98	11.58	13.04	12.38	13.90	13.82
Actual weight of Fat, in Ibs	0.59	1.03	1.01	0.62	0.67	0.03	0.71	1.22	1.05
y 20	11.80	20.60	20.20	12.40	13.40	18.60	11.20	24.40	21.00
Ξ.	lbs., 2.05	2.20	1.64	2.70	2.11	2.00	2:30	2.57	2.03
Calculation of Points multiply by 4	8.20	8.80	0.56	10.80	8.44	8.00	0.50	10.28	8.15
( For time since Calving						National desiration de		0.2	
For weight of Milk (lbs.)	<del>-</del>	66.2			9.92			0.7%	
Points \ For weight of Fat (lbs. × 20)	:	52.6			44∙4			59.60	
onds other t		93.56			46.76			97.60	
:	:	00.07			H 1		1		-
Total	<del>-</del>	142 4			148.2			7.191	
Deductions	<u>:</u>	10-0			50.0			0.01	,
Points gained	:	132.4			128 2		Charles and an arrangement of the Control	151∙4	ORIGINAL AND DON'T
Remarks and Awards	 	3rd Prize.		R	Reserve and Highly Commended	d nded	••	2nd Prize	
	_		- 1	c	7		1		

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Number	:	:	:	:	:		431			432		
Name	:	:	:	:	:	Terl	Terling Ivory 8th.	th.	II.	Pitsea Spider.		
í					-							
Born		:	:	:	:	Ma	May 16, 1915.			-		
Live weight, in lbs.		:	:	:	:		1,312			1,418		
Last Calved		:	:	;	:		Sept. 19.		<b>9</b> _	Sept. 25.		
Days since Calving		:	:	:	:	1	30			42		
						Morn.	Affn.	Even.	Morn.	Aftın	Even.	
Weight of Milk, 1st day	; let day		:	:	:	34.3	32.5	28.4	22.1	19 4	17.2	
Weight of Milk, 2nd day	, 2nd day	٨	:	:	:	33.7	$32 \cdot 1$	27.8	20.5	19 0	133	
L	Total	:	:	:	:	0.89	9.79	56.2	42 6	38 4	30.5	
¥	Average	:	:	:	:	340	32.3	28 1	21.3	19.5	15.25	
I ercentage		:	:	:	:	2.47	3.69	3.45	2.26	38.4	3.91	
	of \ Solids other than Fat	s oth	er tha	n Fat	:	8.51	8.65	8 61	8.54	8 68	8.67	
the Milk.	(Total Solids	Soli	ds	:	:	- 10 98	12.34	12.06	10.80	12.16	12.58	
Actual weight of Fat, in lbs	of Fat, in	l lbs.	:	:	:	F8 0	1.19	0 97	0.48	19.0	09 0	
Calculation of Points multiply by 20	Points m	ultip	ly by	20	:	16 80	23 80	19 40	09 6	13.40	12.0	
Actual weight of Solids other than Fat, in 19s.	of Solids	othe	r than	Fat, i	n 15s.	2 89	2.79	2.41	1 82	1 66	1 32	
Calculation of Points multiply by 4	Points m	ultip	ly by	4	:	11.56	11.16	9.64	7.28	<b>†9 9</b>	5.28	
(For ti	For time since Calving	Caly	'ing	:	:	A TOTAL CANTON PROPERTY AND AND AND AND AND AND AND AND AND AND		STATE OF THE OWNER, CO.	Constitution of the second second	With the Spinish of the Spinish	Commencement	
	For weight of Milk (lbs.)	Milk	(lbs.)	:	:		94 4			55 8		
Points \ For w	For weight of Fat (lbs. $\times$ 20)	Fat (	lbs. ×	20)	:		0 09			35 0		
For w	For weight of Solids other than Fat	olid	s othe	r than	Fat							
sql) )	(lbs. $\times$ 4)	:	:	:	:		32 4			1920		
			Total	I	:		1868			110 0		
			Dedt	Deductions	:		10.0			$10 \ 0$		
			Poin	Points gained	ed		1768			100 0		
Remarks and Awards	wards					L	1st Deigo					
			:	:	:	4	30 T 116C		•			

## THE MILKING TRIALS FOR GOATS, 1925.

By Thos. W. PALMER.

The goats competing in the Milking Competitions were classified the same as at the 1924 exhibition, i.e. She Goats qualified as "Star" or "Q Star" milkers, and She Goats not eligible for previous class. To compete in the Star or Q Star Class, a goat must have obtained a minimum number of points in a Milking Competition, the minimum being 15 for a Star, and 18 or 20 for a Q Star. In the Star Class, points are given for quantity of milk and lactation, whilst the competition extends for three milkings over a period of 36 hours. In the Q Star Class, where the minimum is 18 points, these are obtained for Quantity of Milk, Butter Fat, and Lactation, whilst where the minimum is 20 points, Quantity of Milk, Butter Fat, Solids other than Fat, and Lactation count. In the two latter competitions, there are two milkings over a period of 24 hours, and the percentage of Butter Fat must not be below 4 per cent. at both milkings.

Entries.—These show a considerable reduction when compared with the previous year, the total being 18, i.e. 11 in the Star class and 7 in the Non-Star class, as against a total of 33 at the 1924 Show, 16 being entered in the Star class and 17 in the Non-Star class.

Class 37. Star or Q Star Milkers.—The outstanding goat was Mrs. Arthur Abbey's "Didgemere Dream" Q\*\*. This goat kidded for the first time on May 19th, and her average yield of milk at the Show was 13.35 lbs., which is a record for any Dairy Show, the previous highest yield being at the 1922 Show, when "Didgemere Dulcie" Q\*Q\* gave 12.6 lbs. of milk, and it is worthy of note that these goats are sisters, their sire being Champion t "Prophet of Bashley," and dam "Withdean Countess" Q\*. "Didgemere Dream's" butter fat was 3.48 per cent., and 3.6 per cent. The second prizewinner, Mrs. Morcom's "Leazes Fortitude" \*\* also put up a good record, her average yield being 11.65 lbs., butter fat 3.33 per cent. and 3.64 per cent., whilst she kidded on March 12th. At the 1924 Show, this goat was third in the Star Class. She was not entered at the 1923 exhibition. but at the Show of 1922 she was first in the Non-Star class, so has proved herself a consistent milker. The third prize was awarded to Mrs. Abbey's "Didgemere Ding" \*Q\*Q\*Q\*, who kidded for the first time on March 3rd, and whose average yield was 9.45 lbs. with butter fat 4.77 per cent., and 4.49 per cent. This goat qualified for the Q Star at this Show, having previously qualified for the Star.

Class 38. Goats not eligible for Class 37.—There were no outstanding yields in this class, the best being that of the first prizewinner "Didgemere Dove," belonging to Mrs. Abbey. This was another first kidder, having kidded on March 2nd. Her yield was 8·25 lbs., butter fat 4·25 per cent., and 3·98 per cent. Had the latter been 4 per cent. (a difference of 0·02 per cent.) she would have qualified for the Q Star. The second on the list—"Play of Bashley"—was a goatling in milk. She kidded on August 3rd, her yield being 8·2 lbs., with butter fat 5 per cent., and 4·85 per cent. The third prizewinner was Miss Harrison's "Myrtle" who, kidding on May 30th, gave a yield of 7·7 lbs., with 4·21 per cent., and 3·90 per cent. butter fat.

I now take the goats as classified for inspection, the latter classes being exactly the same as at the 1924 Show:—

Class 39. Toggenburg.—Five entries, but not one animal entered for the Milking Trials.

Class 40. British Toggenburg.—Cancelled.

Class 41. British Alpine.—Six entries, four of whom were also entered in the Milking Competition. Mrs. Browell's "Pogo of Bashley" Q\* was Reserve in the Milking Class for Star Goats, with a yield ox 7.95 lbs., and total points 23.83. This goat obtained third prize in the Inspection Class. Mrs. Abbey's "Didgemere Dusky" \*Q\*Q\*; came next in order of points; yield 8.7 lbs., total points 23.34, and obtained a High Commendation. The other two animals also obtained High Commendations, Mrs. Abbey's "Didgemere Delilah" \*Q\*Q\*Q\*, yield 8.65, points 22.99, also securing second prize in Inspection, and the same exhibitor's "Didgemere Dawdler" \*Q\*Q\*; yield 7.1 lbs., points 20.1, this goat being first by Inspection.

Class 42. She Goats, Saanen.—Two entries for Inspection, but neither of them were entered for milking.

Class 43. Anglo-Nubian.—There were five entries for Inspection, three of whom were also entered for milking, but one was absent. Of the two competing, Miss Pelly's "Nash Bellona" Q\*Q\* was first in the class by Inspection, and also gained the Pomeroy Cup for the highest number of points gained by an Anglo-Nubian goat in the Milking Competition. Her yield was 5.55 lbs., total points 18.93.

Class 44. Any other Variety.—Eleven animals were entered for Inspection, and nine of these were also entered for Milking—or absentee. Mrs. Abbey's "Didgemere Dream" Q\*\* was very successful. Not only did she secure premier honours in milking, with a yield of 13.35 lbs., but she was first in her class for Inspection, and when the

goats were re-judged for the Challenge Certificate. she was at the top. It may be of interest to place on record her successes at this Show -First prize in Class 44 (Inspection), winner of the Challenge Certificate for the best goat over two years. Challenge Cup for best goat over two years, First prize in Class 37 (Milking), winner of the Dual Purpose Challenge Certificate, Baroness Burdett Coutts' Challenge Cup. Tremedda Selene Challenge Cup and Dewar Challenge Trophy, whilst she also helped to win the Dewar Cup and the Riding Cup. The second prizewinner, Mrs. Morcom's "Leazes Fortitude" \*\*, vielded 11.65 lbs. milk, and she was also second by Inspection, whilst she was Reserve for the special prizes, with the exception of the Challenge Certificate for the best goat over two years. Challenge Cup for best goat over two years, Dewar Cup and Riding Cup. The third prizewinner was Mrs. Abbev's "Didgemere Ding" \*Q\*Q\*Q\*, with a yield of 9.45 lbs. This goat also obtained third prize in the Inspection Class. The first prizewinner in Class 38. Mrs. Abbey's "Didgemere Dove," was also entered in this class, her yield being 8.25 lbs., as also was the second prizewinner, Mrs. Browell's "Play of Bashley," whose yield was 8.2 lbs.

No goat was deficient in butter fat, and this is the third year in succession that all the samples taken from the goats have been over the standard. The analysis of the milk showed the following results:—Six samples were over 3 per cent. and under 4 per cent., 11 samples were over 4 per cent. and under 5 per cent., eight samples were from 5 per cent. and under 6 per cent., four samples were over 6 per cent. and under 7 per cent., whilst three samples were over 7 per cent. The lowest percentage of butter fat was 3.33, and the highest percentage 7.65.

I append the usual tabulated statement (No. 1), showing the goats entered for both Inspection and Milking, whilst Table No. 2 has been brought up to date.

Table I.

Number in   Number in   Class   Number of   Numb	Number in Class   Subsection   Class   Subsection   Class   Subsection   Com.   Poetings   Verlage Vield   Verlage Vield   Verlage Period   Verlage Period   Vield   Com.   Highest   Vield   Com.   Highest   Vield   Com.   Co			-	The second second second second			-		-	I	-	1		Appropriate and the same	8
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4       4       172       8·1       8·65       7·1       242       5·11       8·95       —         3       2       156       5·2       5·55       4·85       198       7·18       10·05       —         9       8       145       8·45       13·35       3·85       187       4·84       8·82       —	4       4       172       8·1       8·65       7·1       242       5·11       8·95         3       2       156       5·2       5·55       4·85       198       7·18       10·05         9       8       146       8·65       13·35       3·85       187       4·84       8·82	1				llbs.	lbs		,8;	lls.	days.		a was	a.m.	p.m.	
4       4       172       8·1       8·65       7·1       242       5·11       8·95       —         3       2       156       5·2       5·55       4·85       198       7·18       10·05       —         9       8       145       8·45       13·35       3·85       187       4·84       8·82       —	4       4       172       8·1       8·65       7·1       242       5·11       8·95       —         3       2       156       5·2       5·55       4·85       198       7·18       10·05       —         9       8       145       8·65       13·35       3·85       187       4·84       8·82       —		:	1	1		1				1		1	No.	I	1
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Вот	:	;	;	:		Feb. 21, 1922.	1922.	June 1, 1921.	, 1921.	Nov. 19, 1922.	, 1922.	May 6, 1921.	1921.
Live weight, in Ibs.	lbs.		:	: :		180	_	17	176	7	156	176	==
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•						Morn	Even	Morn	Even	Morn	Even	Morn	Even
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A	Average	:	÷	:	:	4.5	3-45	4.1	3.0	5.0	3.65	4.7	0.7
Percentage	F.B.	:	;	;	1	5.75	6.46	4.18	5.29	4.67	4.77	4.86	4.90
Composition of	~	Solids other than Fat	er thar	1 Fat		8.89	9.56	80.6	9.17	8.87	8.87	8.86	8.63
the Milk.		Total Solids	ds	:	:	14.64	15.72	13.26	14.46	13.54	13.64	13.72	13.52
Actual weight of Fat, in lbs	of Fat,	in Ibs.	÷	÷	:	0.26	0.22	0.17	91.0	0.23	0.17	0.23	05-0
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Calculation of Points multiply by	Points	multip	ly by 4	::	:	1.6	1.28	1.48	1.12	1.76	1.28	1.68	1.36
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CLASS 37.—SHE GOATS (QUALIFIED AS "STAR OR 'Q' STAR MILKERS")—Continued.

494 Didgemere Ding.	Feb. 9, 1923. 151 Mar. 3. 230	Even 4·3 3 9 8·2 4·1	4.49 8.63 13.12	0·18 3·6 0·35	3.2 9.45 8.8 3.24	24.69 	3rd Prize.
4 Didgem	Feb. 9 1 Ma	Morn 5.6 5.1 10.7 5.35	4.77 8.59 13:36	0.26 5.2 0.46		<b>.</b>	3rd
3 · Dream.	, 1923. 6 19.	Even 5.9 5.6 11.5 5.75	3.60 8.20 11.80	0.20 4.0 0.47		E . E	Baroness outts Cup. Selene Cup. Prophy.
493 Didgemere Dreum.	Feb. 17, 1923, 166 May 19. 153	Morn 7.9 7.3 15.2 7.6	3.48 8.18 11.66	0.265 5.3 0.62	13.35 13.35 9.3 4.36	28-91	1st Prize. Baroness Burdett-Coutts Cup. Fremedda Sclene Cup. Dewar Trophy.
487 Theydon Belladonna,	, 1922. 8 14.	Even 2.1 2.2 4.3 2.15	7.59 10.11 17.70	0·16 3·2 0·22	2.0 4.85 6.8 1.96		
487 Theydon Bel	Sept. 15, 1922. 138 May 14. 158	Morn 2.6 2.8 5.4 5.4	6.83 9.83 16.66	0·18 3·6 0·27 1·08		15.61	
486 Nash Bellona,	Mar. 25, 1920. 175 Feb. 24. 237	Even 2·4 2·4 4·8 2·4	$^{7.65}_{10.25}_{17.90}$	0·18 3·6 0·25	1000	33	y Cup.
486 Nash Bell	Mar. 25, 19 175 Feb. 24, 237	Morn 3-1 3-2 6-3 3-15	6.65 10.03 1 <b>6.</b> 68	0.21 4.2 0.32 1.28	3.33 7.85 7.82 2.22	18.93	Pomeroy Cup.
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CLASS 37.—SHE GOATS (QUALIFIED AS "STAR OR "() STAR MILKERS")	The state of the s

Number	 Cha	Fortitude.	0.00	Man.	)+1	Mar. 12.	221	Morn Even				12.8 10.5	6.4 5.25	3.33 3 64	8.61 8.84	11.94 12.48	0.21 0.19	4.2 3.8	0.55 0.465	2.2 1.86	The second secon	11.65	0.8		4.06	26.71	1	26-71	and Prize Reserve for Baroness Burdett-Coufts. Cup. Res for Tremedia Selene Cup and Reserve for Dewar Trophy
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			ı	Born	Live weight, in	Last Kidded	Days since Kid		117 L. L. BASIL	Weignt of Milk	Weight of Milk		V		Composition of	the Milk.	Actual weight	Calculation of	Actual weight	Calculation of	(For ti	For w	-Y	For w	(1bs	,			Remarks and A

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38 -SHE GOATS	
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	491 495 Play of Bashley. Didgemere Dove.	April 25, 1924.   Feb 17, 1923. 149   150 Aug. 3.   Mar. 2, 77   231	Morn         Bven         Morn         Bven           4-8         3-7         4-6         3-6           4-4         3-5         4-6         3-7           9-2         7-2         9-2         7-3           4-6         3-6         4-6         3-65	4.85 4.25 9.03 8.47 13.88 12.72 1	0.23     0.175     0.2     0.15       4.6     3.5     4.0     3.0       0.41     0.33     0.39     0.30       1.64     1.32     1.56     1.2	9.6 8.2 8.2 8.25 8.25 8.25 8.25 19.86 2.76 21.21	2nd Prize.   1st Prize.
THE LOW OTHER	472 Myrtle,	1918. 104 May 30. 142	Morn Even 4-1 3·3 4-4 3·6 8·5 6·9 4-25 3·45		0.18 0.135 3.6 2.7 0.38 0.30 1.52 1.2	1.7 7.7 6.3 2.72 18.42	3rd Prize.
TOTAL CONTRACT	471 Snowey of Weald.	Mar. 31, 1921. 107 Mar. 3. 230	Morn         Even           3.4         2.6           3.2         2.3           6.6         4.9           3.3         2.45		0.14     0.13       2.8     2.6       0.31     0.23       1.24     0.92	3.2 5.4 5.4 2.16 16.51	Reserve.
TITLE OF COUNTY OF THE PARTY OF	Number	Born Live weight, in lbs	Weight of Milk, 1st day	Percentage (Fat Composition of Solids other than Fat the Milk. (Total Solids	Actual weight of Fat, in Ibs Calculation of Points multiply by 20 Actual weight of Solids other than Fat, in Ibs. Calculation of Points multiply by 4	For time since Kidding   For weight of Milk (lbs.)   For weight of Solids other than Fat (lbs. × 4)   Total Total   Peductions	Remarks and Awards

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CLASS 38.—SHE GOATS	
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497B	Cornish Guinevere.	Mar. 22, 1923.	121	June 4.	137	-	9.6	2.5	5.1	2.55	THE PERSON NAMED OF THE PE	90.6	16.00	0.15	3.0		0.92	1.6	5.55	6.4	2.04	15.50	60-03	15.59	
	('ornis	Mar.		بر س		Morn	3.1	6.5	<u>.</u>	ဗ္	5.76	9.58	15.04	0.17	3.4	0.28	1.12						•		
497	Nichette.	1921.	ž.	17.	4	Even	1.8		3.6	1.8	7.24	9.46	16.70	0.13	2.6	0.17	89-0	4	3.85	œ	1.44	40	i fi	49	
4	Niel	61	125	Feb. 17.	244	Morn	2.5	1.9	4.1	2.05	5.59	9.45	15.04	0.11	2.2	0.19	92.0	3.4	က်	4	-	13.40	F. CT	13.49	
9	tte.	1922.	6	30.	9	Even	1.9	20	3.0	1.95	6.47	9.05	15.52	0.13	2.6	0.18	0.72		ō		οç	9	۰.		
496	Coquette,	May 1, 1922.		Mar. 30.	203	Morn	5.1	2.1	4.2	2.1	5.01	9.13	14.14	0.11	2.2	0.19	94.0	2.7	4.05	4.8	1.48	20.21	Per I	13.03	
:	:	:	:	:	:	-	:	:	:	:	:	:	:	<del>'</del> :	:	n Ibs.	:	:	:	: +0	7		: :	bet	
:	:	:	:	:	:		:	:	:	:	:	an Fat	:	3	02	n Fat, i		:	:	× 20)	er onan	Total	Deductions	Points gained	:
:	:	:	:	:	:		:	:	:	:	:	ther th	olids	sc	aply by	ner tha	iply by	idding	lk (Ibs.	t (lbs.	mas con	Ē	Dec	Poi	;
:	:	:	:	:	:		day	d day	:	Average	at	Solids other than Fat	Total Solids	at, in Il	ts mult	olids otl	ts mult	since K	t of Mi	t of Fa	4)				sb.
:	:	:	t, in lbs	: ت	Kidding		Milk, 1st	Milk, 2n	Total	Aver		~		tht of E	of Poin	tht of Sc	of Poin	For time since Kidding	or weigh	For weight of Fat (lbs. × 20)	Obs. X				nd Awar
Number	Name	Born	Live weight, in lbs	Last Kidded	Days since Kidding	<b>L</b>	Weight of Milk, 1st day	Weight of Milk, 2nd day	,		Percentage	Composition of	the Milk.	Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs.	Calculation of Points multiply by	(FC	Ĕ.	Points $\langle F_0$	3	J			Remarks and Awards

## THE DAIRY SHOW BUTTER TESTS OF 1925.

By R. H. Evans, B.Sc.

The Prizes in the Butter Tests were awarded according to the following scale of points:—

One point for every ounce of butter; one point for every completed 10 days since calving (calculated to the first day of the Show), deducting the first 40 days. Maximum allowance for period of lactation, 12 points.

Fraction of ounces of butter, and incomplete periods of less than 10 days, to be worked out in decimals, and added to the total points.

In the case of cows obtaining the same number of points, the prize to be awarded to the cow that has been longest time in milk.

A Certificate giving the last date of calving (which must be before 9 a.m. on October 6th), must reach the Secretary by Saturday, October 10th.

No prize will be awarded to animals in the Butter Tests which do not come up to the following Standard:—

	Br	eed.	Cows under 5 years. Points.	Cows 5 years and over. Points.			
Pedigree Shor Non-Pedigree British Friesia Lincolnshire H Jerseys Guernseys Ayrshires Red Polls South Devons Kerries Dexters Devons Welsh Blacks Blue Albions	Short ans Red S	thorns	 ms			30 30 30 30 30 27 27 27 30 30 26 26 27 27	34 34 34 35 30 30 34 34 29 29 30 30 34

Certificates of Merit and Highly Commended Cards will be given to Animals, other than Prize Winners, that reach the above standard.

The total number of entries, and the actual number tested at the 1925 Show, were as follows:—

	Bre	ed.				Number entered.	Number tested.
Pedigree Short	horns					26	13
Non-Pedigree S			•••	•••		9	2
Lincolnshire R						13	10
British Friesian						38	19
South Devons						4	$^2$
Dairy South D	evons					1	1
Devons	• • • •					9	8
Red Polls		• • •	• • •			14	6
Blue Albions						9	6 5
Welsh Blacks		• • •				5	2
Ayrshires						44	31
Guernseys						33	18
Jerseys		• • •				37	24
Kerries	•••					15	7
Dexters	•••	• • •		,		6	3
Three-Times M	[ɪlkers	•••	•••		•••	4	3
			Total		!	267	154

Owing to the prevalence of Foot and Mouth Disease in various parts of the country, several cows which had been entered for the tests, were prevented from competing.

The number of Shorthorns tested shows a decrease of 3, as compared with the 1924 figure. The average yield of butter in this class is less than that obtaining at the 1924 Show—the respective figures being 1 lb. 11½ ozs. against 1 lb. 15 ozs. The butter ratio also shows a falling off—this being 1 to 27.6 as compared with 1 to 25.54 in 1924. Five of the 15 cows tested yielded over 2 lbs. of butter, each, in 24 hours. The highest yielder in this class was Mr. T. P. Preece's "Pencoyd Blanche 2nd," her yield amounting to 2 lbs. 6 ozs.

Major Yates cow "Rickerscote Foggathorpe," which had calved 144 days, as against 41 days in the case of "Pencoyd Blanche 2nd," carried premier honours, her yield being 2 lbs. 3\frac{3}{4} ozs., with 10.4 points for lactation. The performances of Mr. A. B. Croxon's "Spot," with a yield of 2 lbs. 4 ozs., and Mr. F. H. Thornton's "Kingsthorpe Countess Ruby 2nd," with a yield of 2 lbs. 3 ozs. were also very creditable.

Two more Lincolnshire Red Shorthorns were tested in 1925, than was the case at the 1924 Show. The average yield in this class was 2 lbs. 1½ ozs., a decided increase on the 1924 figure of 1 lb. 12 ozs. The highest yield was that of Mr. John Evens' "Burton Amy 7th,"

2 lbs.  $11\frac{3}{4}$  ozs. This animal was closely followed by "Burton Hempy 6th," belonging to the same owner, with a yield of 2 lb. 11 ozs. Mr. S. Reading's, "Langford Queen 7th," Mr. John Evens' "Burton Ethel 8th," and the Green Estate Co.'s "Langford Castle V," yielding respectively 2 lbs.  $6\frac{1}{2}$  ozs., 2 lbs. 5 ozs., and 2 lbs.  $4\frac{1}{2}$  ozs., are also worthy of mention.

The 19 British Friesians tested—a decrease of 4 on the 1924 figure—yielded on an average 1 lb. 15 ozs. of butter in 24 hours. This figure shows an increase of 3 ozs. on the average weight obtained at the previous Show. The First Prize in this class was awarded to the cow "Haydon Pax," from the Hache Herd. This cow yielded 3 lbs. 1 oz. from 68 lbs. 2 ozs. of milk, giving a butter ratio of 1 to 22·2—a very creditable performance. Mr. B. Parkinson's "Thurston Karel's Emily" carried the Second Prize, with a yield of 2 lbs. 5½ ozs., having calved 124 days, thus gaining 8·4 points for lactation. Other animals which did well in this class were Mr. S. Pyman's "Felhampton Susan;" with a yield of 2 lbs. 6½ ozs., and "Hache Akkar Virtue," and "Hache Vespers," from the Hache Herd, with yields of 2 lbs. 4½ ozs., and 2 lbs. 5¾ ozs. respectively.

Of the two South Devon cows tested, Mr. G. Wills' "Snowdrop 2nd," yielded 3 lbs.  $2\frac{3}{4}$  ozs., with a butter ratio of 1 to  $19\cdot 8$ —an excellent performance.

The Dairy South Devon cow, "Fairy Lady 2nd," belonging to Mr. R. Hall, yielded 2 lbs.  $4\frac{1}{2}$  ozs. of butter, showing a butter ratio of 1 to 18.9.

The eight Devon Cows tested proved a good class, six of their number reaching the standard points for the breed. The highest yield was that of Mr. A. T. Loram's "May"—her yield amounting to 2 lbs.  $5\frac{1}{2}$  ozs. "Janet," the property of the same exhibitor, yielded 2 lbs.  $3\frac{1}{2}$  ozs., and Mr. Chick's two cows "Compton Holly" and "Lovely 4th," yielded 2 lbs.  $2\frac{1}{4}$  ozs., and 2 lbs. of butter respectively.

The average yield of butter in the Red Poll Class was 1 lb.  $11\frac{1}{2}$  ozs., as compared with 1 lb.  $7\frac{3}{4}$  ozs. at the 1924 Show, and 1 lb.  $9\frac{3}{4}$  ozs. at the 1923 Show. The highest yield, 1 lb.  $15\frac{1}{4}$  ozs., was that of Major J. A. Morrison's "Spalding Pearl." Mr. Scrimgeour's cow "Tendring Floss 29th," with a yield of 1 lb.  $10\frac{1}{4}$  ozs., and a maximum of 12 points for lactation, was awarded the First Prize.

The five Blue Albions tested proved a good lot, four of their number yielding over 2 lbs. of butter each. The First Prize was awarded to Col. W. E. Harrison's "Bramshall Joan," with a yield of 2 lbs.  $5\frac{3}{4}$  ozs. Mr. J. D. Seal's "Pike Venice," "Pike Verocity," and "Bradbourne Giddy Girl," yielded 2 lbs. 4 ozs., 2 lbs.  $2\frac{1}{4}$  ozs. and 2 lbs.  $0\frac{1}{4}$  ozs. respectively.

Two Welsh Black cows competed, and a Prize of £3 was awarded to Mr. C. W. Compton's, "Hall Green Gift," with a yield of 2 lbs.  $3\frac{3}{7}$  ozs., and a butter ratio of 1 to 16.5.

The number of Avrshires tested shows an increase of 16 on the 1924 figure. This breed once more gave ample proof of their butteryielding capacity. The average vield, however, showed a slight decrease on the 1924 figure, the amount being 1 lb. 143 ozs. in 1925, as compared with 2 lbs. 01 oz. in 1924. Neither was the butter-ratio as good as that of the previous year, the figures being 1 to 26.60., and 1 to 22.65 respectively. The average results obtained in this class however, proved a very creditable one, considering the large number of cows tested, and the long distances most of the cattle had to travel. The premier honour went to Mr. W. Adamson's "Harleyholm Rosebud 2nd," with a yield of 2 lbs. 15; ozs.; and a butter ratio of 1 to 19.9. Mrs. H. Craufurd's "Dunlop Harpischord," carried the Second Prize, with a yield of 2 lbs.  $10\frac{3}{4}$  ozs. The Third Prize went to Mr. Q. Dunlop's "Greenan Kate 6th," her yield amounting to 2 lbs. 83 ozs., to which 1.4 points were added for lactation. The Reserve Card went to Major C. R. Dudgeon's "Cargen Holm Proud Lady 8th," with a yield of 2 lbs. 91 ozs., the cow receiving no points for lactation.

Two more Guernseys were tested in 1925 than was the case in 1924. The average yield was slightly less than that of the previous year, the figure being 1 lb. 8 ozs. as compared with 1 lb. 9 ozs. Mr. T. R. Bolitho's "Tregye Maze," took first place with a yield of 2 lbs.  $6\frac{1}{4}$  ozs., and a butter ratio of 1 to 13·7, this cow having calved 191 days, thus gaining the maximum of 12 points for lactation. Mr. J. B. Body's "Morland Lady Richmond," was second, her yield being 2 lbs.  $2\frac{3}{4}$  ozs. These were the only two animals, out of the 18 tested, which yielded over 2 lbs. of butter.

The number of Jerseys tested was only 24 as compared with 32 at the previous Show. As usual this proved an excellent class. The premier place was taken by Mr. R. Bruce Ward's "Pirouette," her yield amounting to 2 lbs.  $7\frac{1}{2}$  ozs., having calved 153 days, thus gaining 11.3 points for lactation. This cow was the Reserve for the "National Butter Cup." The Second Prize went to Mr. F. B. Imbert-Terry's "Blue Hayes Sporran," with a yield of 2 lbs.  $3\frac{1}{2}$  ozs., having calved 248 days, thus gaining the maximum points for lactation. This cow—weighing only 871 lbs. live weight, won the "National Butter Cup."

The seven Kerries competing proved the best lot of Kerries ever tested at the Dairy Show. Four out of the seven yielded over 2 lbs. of butter each in 24 hours. The First Prize was easily won by Lady Fitzgerald's "Buckland Peace 2nd," her yield being 2 lbs.  $12\frac{3}{4}$  ozs. with a butter ratio of 1 to  $20\cdot1$ —an excellent performance for a Kerry.

Two of the three Dexters tested reached the standard points for the breed.

No award was made in the "Three-times Milking" class, as none of the animals competing reached the necessary points.

My best thanks are due to my colleague Mr. J. G. W. Stafford, and others who rendered me valuable assistance in the carrying out of the tests.

The following table gives the average results for all breeds competing:—

Year.			Total No. of Cows.	Average weight of 24 hours' Milk.	Yie	erage eld of tter.	Average Butter Ratio.	Average No. of Points.
1919 1920 1921 1922 1923		The state of the s	94 111 173 187 143	$   \begin{array}{r}     37\frac{1}{2} \\     39 \\     39\frac{3}{4} \\     42\frac{1}{2} \\     41\frac{3}{4}   \end{array} $	lbs. 1 1 1 1	0ZS. 934 914 612 814 112	23·43 24·21 25·35 27·99 24·03 24·21	28·61 28·25 27·68 26·31 32·23
1924 1925	•••	•••	148 154	$43\frac{1}{2}$ $46\frac{1}{4}$	1	$12\frac{1}{2}$ $13\frac{1}{2}$	25·59	32·55 32·61

TABLE I.—NUMBER OF CATTLE TESTED SINCE 1901.

1925	<u>:</u>	3	2	21	-	20	<b></b>	10 	21	<u></u>	<u>x</u>	7	3 3 1 154
1024	$\overline{\mathbf{x}}$	x	25 25 26	1	1	sc .	17	+	1	15	16	32	100
1921	34	Ç.	23	n	1	ıs	ឌ	1	1_	91	10	25	8 
1999	33	7	çı	æ		~	23	-	<del>-1</del>	20	15	27	13 3 187
1921	63	7	10	10	1	9	17	1	1	C3	19	24	17 8 1 1 27
1901 1902 1908 1906 1906 1908 1908 1908 1908 1908 1908 1908 1908	30	4	15	1	1	<b>C</b> 3	12	1	1	1	14	21	8 1     1 m
1919	42	4	ગ	1	1	73	11			1	91	55	49   1   6
1915	50	31	<b>C</b> 3	ຄ	1		7			-	. 7	01	1111 24
1914	03	4.	-	9	1	_	1	l	1	1	5		1 1 1 1 54
1013	92	ī.	1	61		1	1	1	1	1	9	18	62         5
1912	30	9	1	4	1	1	-	i_	1	4	¢.1	7	1     42
11011	26	9	_	61			-	_	_		H	18	55
1910	22	00	1_	_	1		4	1	1	-	61	18	
1908	19	00		4			4	_1_	1	1	63	22	61
1908	56	<b>G</b>			_		8	1	1	4	~	16	65     32
1807	26	7					1			1	Ø	13	61   61
1906	22			70	1	_	15	1	1	63	63	13	68   10   10
1905	17	-	1	ಣ			11		1	ಣ	ಣ	18	1 8 8 64
1904	14	1	1	61	_		4		1	_	ಣ	12	12   2   4
1903	18			61	1		10	_	1		20	20	1 8 1 29
1905	31	1			1		9	1			_	30	11 2 11 82
1001	55			1	1	1	64	1	1	-	∞	25	55   2   45
*	:	:	:	:	suc	:	:	:	:	:	:	:	::::::::::::::::::::::::::::::::::::::
	:	:	ians	:	Ъеус	:	:	:	:	:	:	:	.:. Millke .::
Breed	Shorthorns	Lincoln Reds	British Friesians	South Devons	Dairy South Devons	Devons	Red Polls	Blue Albions	Welsh Blacks	Ayrshires	Guernseys	Jerseys	Kerries Dexters Three-Times Milkers Cross-Breds Dutch Totals
-	25 d	Ļ	Br	So	Da	De	R	Ŕ	We	Ay	C'n	Jer	Ke Da Da

Table II.—Number of Cattle of the various Breeds Tested since 1895, with their Average Period of Lactation, Weight of Butter, Butter Ratios, and Points.

Year.	No.	Breed.	Average No of Days in Milk,	Average Weight of Butter.	Average Butter Ratio.	Average No. of Points.
				lbs. ozs.	lbs.	.1
From 1895 to 1915	447	Shorthorns	48	1 113	29.19	
1919	24	,,	34	$1 13\frac{7}{4}$	24.35	28.82
1920	30	,,	34	$1 11\frac{7}{4}$	25.43	27-91
1921	63	.,	29	18	30.25	24.20
1922	39	,,	30	1 9	30.75	25.68
1923	34	,,	57	1 141	26.01	32.59
1924	18	,,	$34\frac{3}{4}$	1 15	25.54	31.95
1925	15	,,	40	$1  11\frac{1}{2}$	27.60	28.46
From 1907 to 1915	55	Lincoln Reds	613	1 131	30.31	
1919	4	,,	58	$1 \ 13\frac{3}{4}$	29.20	32.32
1920	4	.,	59	$1  5\frac{7}{2}$	31.61	23.90
1921	7	,,	64	$1  13\frac{7}{4}$	27.13	31.40
1922	7		311	$2  3\frac{3}{4}$	24.82	35.89
1923	9	,,	58	$1 14\frac{3}{2}$	26.37	32.73
1924	. 8	,,	$72\frac{3}{3}$	1 12	27.43	32.11
1925	10	,,	39	$2  1\frac{1}{2}$	27.27	34.27
From 1914 to 1915	3	B't'h Friesians	71	1 73	41.60	_
1919	2	,,	28	1 10 <del>1</del>	36.05	26.50
1920	15	,,	50	1 13	29.59	31.17
1921	10	,,	85	2 3	28.26	39.00
$1922 \dots$	24	,,	57	1 10	35.32	26 86
$1923 \dots$	13	,,	65	1 11 <del>1</del>	32.22	31.76
1924	23	,,	573	1 12	31.87	30.28
1925	19	,,	45	1 15	32-36	32.50
From 1909 to 1915	28	South Devons	87	1 9½	31.41	
1921	5	.,	77	1 14}	22.06	34.42
1922	5	,,	55	1 13	27.04	29.25
$1923 \dots$	3	,,	36	2 31	21.43	35.76
1925	2	,,	111	2 8 1	17.80	46.25
1925	. 1	Dairy South Devon	124	$2  ext{ } 4rac{1}{2}$	18-90	44.90
1919	5	Devons	60	1 91	24.47	27.57
1920	2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	25	1 151	19.32	31.55
1921	6	11	48	1 152	21.92	32.60
$1922 \dots$	7	,,	471	1 103	27.00	28.53
1923	5	,,	41	1 141	23.18	31.29
1924	3	· "	403	1 101	24.88	26.50
1925	8	1	51	$1   13\frac{1}{4}$	24.40	30.78
From 1895 to 1915	95	Red Polls	701	1 3	30.62	-
1919	11	,,,	49	1 81	30.03	26.02
1920	12	77	61	$1  5\frac{1}{2}$	31.46	23.66
1921	17	,,	68	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24.73	27.52
1922	23	,,	59	$1  3\frac{3}{2}$	34.09	21-75
1923	13	33	57	$1   9\frac{3}{4}$	26.67	28-00
1924	17	,,	761	1 71	25.79	24-96
1925	6	,,	63	î 111	28.70	30-20

Table II.—Number of Cattle of the various Breeds Tested since 1895, with their Average Period of Lactation, Weight of Butter, Butter Ratios, and Points—Continued.

OF DUILER,	בנטעב	ER ITATIOS, A	נט ד עאי.	LNTSCOM	inuea.	
Year.	No.	Breed.	Average No. of Days in Milk.	Average Weight of Butter.	Average Butter Ratio.	Average No. of Points.
1924 1925	4 5	Blue Albions	$\frac{26\frac{1}{2}}{35}$	lbs. ozs. 1 15 $\frac{1}{4}$ 2 $0\frac{3}{4}$	lbs. 23·34 28·70	31-63 33-11
1922 1925	4 2	Welsh Blacks	52 42	$\begin{array}{ccc} 1 & 13\frac{1}{4} \\ 1 & 15\frac{1}{2} \end{array}$	24·23 21·60	30·45 31·62
From 1895 to 1915 1921 1922 1923 1924 1925	25 2 20 16 15 31	Ayrshires ,	$64$ $39$ $32\frac{1}{2}$ $29$ $27$ $33$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	27·42 20·15 31·92 23·88 22·65 26·60	37·20 32·18 30·35 32·40 31·60
From 1895 to 1915 1919 1920 1921 1922 1923 1924 1925	74 16 14 19 15 10 16 18	Guernseys " " " " " "	85½ 80 82 82 52 52 66 84 100	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22·72 19·76 21·22 20·45 21·95 22·89 22·30 22·10	27·16 28·53 27·47 27·31 30·13 29·08 29·41
From 1895 to 1915 1919 1920 1921 1922 1923 1924 1925 From 1895 to 1915	375 22 21 24 27 25 32 24 26	Jerseys ,, ,, ,, ,, Kerries and	1123 111 106 127 105 135 132 135 101	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19·19 18·76 18·85 18·56 19·82 18·49 17·75 18·61 31·97	33·59 32·74 32·29 31·99 35·31 38·11 38·60
1919 1920 1921 1922 1923 1924	4 8 17 13 7 10 7	Dexters Kerries  "  "  "  "  "  "	32 63 76 51 156 82 68	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	27-66 22-81 23-16 29-33 24-60 26-90 24-58	18-71 25-77 22-43 19-34 29-74 24-42 34-65
1919 1920 1921 1922 1923 1924 1925	6 5 3 8 2 3	Dexters "	129 112 153 143 150 78 118	0 151 0 121 0 11 0 131 0 132 1 73 1 51	23·48 21·78 24·33 25·82 25·20 23·01 25·40	23·84 19·21 22·30 21·73 23·56 20·35 29·22
1925	3	Three times Milkers	24	1 114	40.10	27.25

Table III.—Average Yield of Butter of the Different Breeds at Different Periods.

		DEL	TT SOUT	ונינינינ	31013111 1	1210101			
Year.	Breed.	No. of Cows.	Days in Milk, 50	No. of Cows.	Days in Milk, 100.	No. of Cows.	Days in Milk,135.	No. of Cows.	Days in Milk, 190.
1895 to			lbs. ozs.		lbs. ozs.		lbs. ozs.		lbs. ozs.
1915	Shorthorns	192	$1\ 12\frac{3}{4}$	43	$19\frac{1}{2}$	18	1 81	8	$1  1\frac{1}{2}$
1919	,,	20	1 131	4	1 121		_ "		
1920	,,	25	$1 \ 12\frac{7}{4}$	5	1 61		-		; —
1921	,,,	56	$1 8\frac{7}{2}$	5	$1 5\overline{5}$		-		
1922	"	33	1 9	5	$1  ext{ } 4\frac{5}{4}$	1	$1\frac{1}{2}$		_
1923	"	24	1 151	4	$2 0\frac{1}{3}$	2	1 13	4	1 5
1924		16	2 0	1	$1 \ 3\frac{3}{4}$			1	1 11
1925	,,	12	$1\ 12\frac{3}{4}$	2	$0.15\frac{3}{4}$			1	$2  3\frac{3}{4}$
1907 to	Lincoln	30	$1 \ 13^{1}_{10}$	5	1 11	4	1 95	4	$1  11\frac{1}{8}$
1915	Reds		1"						
1919	,,	2	1 144	1	$2 \ 3\frac{1}{2}$	1	1 61		
1920	,,,	2	1 81	2	$1 2\frac{5}{2}$				
1921	,,	4	$1 \ 14^{\frac{7}{2}}$	1	$1.10\frac{5}{4}$	2	1 111		
1922	,,,	7	$2 \ 3^{\frac{5}{4}}$				i — -		
1923	"	5	$1 \ 12\frac{3}{4}$	2	1 10			2	1 8
1924	,,	5	$1 \ 12\frac{3}{4}$			2	1 8	1	2 1
1925	***	8	2 2	2	$1 \ 14\frac{1}{4}$		- '		_
1914 to		1	1 14	1	1 10	1	1 3½		_
1915	Friesians	-	1 11	-	1 10	-	1 02		
1919	t .	2	1 101						
1920	,,	10	$1 12_{4}^{7}$	3	1 113	2	$2  2\frac{1}{4}$		
1921	,,	3	$2  3\frac{1}{4}$	2	1 14	$\bar{3}$	$\frac{1}{2}$ $\frac{1}{6\frac{1}{2}}$	2	$2 1\frac{1}{2}$
1922	"	17	1 111	$\bar{3}$	1 123	$\tilde{2}$	$1 0\frac{3}{4}$	2	$\begin{bmatrix} \bar{1} & \bar{0} \end{bmatrix}$
1923	"	6	1 74	4	2 03	$\bar{1}$	$\frac{1}{2}$ $\frac{1}{4}$	$\bar{2}$	$113\frac{3}{4}$
1924	***	14	2 0	7	1 63			2	1 33
1925	,,	13	1 14	5	$\frac{1}{2}  0\frac{3}{2}$	1	2 51		
1020	**					_			
1909 to	South	10	$1 \ 15\frac{7}{10}$	8	1 63	3	$1 \ 13\frac{1}{3}$	7	1 61
1915	Devons		1"		_				,
1921	,,	1	2 6	3	1 81		_	1	2 7
1922	"	2	2 23	3	$1 10\frac{1}{4}$				
1923	"	2	2 51	1	1 15				
1925	27	1	$3  2\frac{3}{4}$					1	1 133
1925	Dairy S'th					1	2 41	_	_
	Devon						-		
1919	Devons	2	$1 15\frac{1}{2}$	<b>2</b>	1 64	1	1 3		
1920	"	2	1 151		-		_		
1921	"	5	$2 0\frac{1}{2}$		-		_	1	1 6
1922	"	6	$1 12\frac{3}{4}$	_	7.757	_	_	1	$0\ 14\frac{1}{2}$
1923	"	3	1 131	2	$1\ 15\frac{1}{2}$	-			_
1924	77	3	$1 \ 10\frac{1}{2}$		-				_
1925	"	7	1 15	_	- 1				
1895 to	D 1 D "	00	7 67	7 ~	, .,	10	,	_	0 7
1915	Red Polls	33	$1 \ \frac{3\frac{1}{2}}{1}$	15	1 51	10	1 03	7	$0\ 14\frac{1}{2}$
1919	"	6	1 10	5	1 61		0.751		1 ~
1920	**	8	1 71	2	1 2	1	$0.15\frac{1}{2}$	1	1 2
1921	"	7	$1 \ 12\frac{1}{2}$	6	1 63	2	$19\frac{1}{2}$	2	$\frac{1}{2}$
1922	"	13	$1 \frac{2^{\frac{3}{4}}}{2^{\frac{3}{4}}}$	7	1 4	2	$\begin{array}{cccc} 1 & 1\frac{3}{4} \\ 2 & 4\frac{1}{2} \end{array}$	1	0 15
1923	"	7	1 83	4	1 63	1	Z 45	1	$\frac{2}{1}$
1924	77	10	1 10	$rac{2}{1}$	$\begin{array}{c c} 1 & 4 \\ 1 & 10\frac{3}{4} \end{array}$	1	1 74	4	1 3 4
1925	17	6	1 144	1	$1 \ 10\frac{3}{4}$			1	1 101

Table III.—Average Yield of Butter of the Different Breeds at Different Periods—Continued.

Year.	Breed.	No. of Cows.	Days in Milk, 50.	No. of Cows.	Days in Milk, 100.	No. of Cows.	Days in Milk,135	No. ot Cows.	Days in Milk, 190.
1924	Blue Albions	3	lbs. ozs. $1 \ 15\frac{1}{4}$	1	lbs. ozs. 1 15		lbs. ozs.	_	lbs. ozs
1925	niolous ;	4	2 3	1	1 8		-		
1922	Welsh Blacks	2	$1 \ 14\frac{3}{4}$	2	1 43		<u> </u> -		-
1925	**	2	1 15]	-		_	-	***************************************	. –
1908 to 1915 1921 1922 1923 1924 1925	Ayrshires	2 16 14 15 27	$\begin{array}{cccc} 1 & 4\frac{1}{2} \\ 2 & 5 \\ 1 & 7\frac{3}{4} \\ 1 & 15 \\ 2 & 0\frac{1}{4} \\ 1 & 14\frac{1}{2} \end{array}$	$\begin{array}{c} 3 \\ -3 \\ 2 \\ -4 \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			1	0 12
1895 to 1915 1919 1920 1921 1922 1923 1924 1925	Guernseys	17 8 4 7 9 5 8 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	13 5 5 3 2 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9 2 3 2 1 1 3	$\begin{array}{c} 1 & 838 \\ 1 & 2\frac{1}{4} \\ 1 & 2\frac{1}{4} \\ 1 & 7\frac{1}{4} \\ 1 & 5\frac{1}{2} \\ 1 & 6\frac{3}{4} \\ 1 & 10 \\ \end{array}$	12 4 1 5 2 2 3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
1895 to 1915 1919 1920 1921 1922 1923 1924 1925	Jerseys	64 3 6 1 4 1 2	$\begin{array}{c} 1 & 9\frac{1}{2} \\ 1 & 15\frac{1}{4} \\ 1 & 13\frac{1}{2} \\ 1 & 2\frac{1}{2} \\ 1 & 12\frac{1}{2} \\ 1 & 10\frac{1}{2} \\ 1 & 13\frac{1}{2} \end{array}$	70 8 4 8 8 8 3 6 5	$\begin{array}{c} 1 & 9\frac{1}{2} \\ 1 & 7\frac{1}{2} \\ 1 & 11\frac{1}{2} \\ 1 & 11\frac{1}{2} \\ 1 & 11\frac{1}{2} \\ 2 & 1\frac{1}{2} \end{array}$	65 4 3 4 7 8 7	$ \begin{vmatrix} 1 & 11\frac{1}{6} \\ 1 & 12\frac{3}{4} \\ 1 & 14 \\ 1 & 15 \\ 1 & 8\frac{1}{4} \\ 1 & 15\frac{1}{2} \\ 1 & 6 \end{vmatrix} $	98 4 6 8 8 13 17 5	$ \begin{vmatrix} 1 & 10\frac{3}{4} \\ 1 & 11\frac{1}{4} \\ 1 & 5\frac{1}{2} \\ 1 & 7\frac{1}{2}\frac{3}{4} \\ 1 & 10\frac{3}{4} \\ 1 & 14 \\ 2 & 0\frac{3}{4} \end{vmatrix} $
1908 to 1921	Kerries & Dexters	21	1 6	10	1 33	7	0 15‡	13	1 0
1922 1923 1924 1925	Kerries	7 3 2 5	$\begin{array}{cccc} 1 & 2\frac{1}{2} \\ 1 & 12 \\ 1 & 10\frac{1}{2} \\ 2 & 3 \end{array}$	5 1 6	$\begin{array}{cccc} 1 & 1 \\ 1 & 8 \\ 1 & 2\frac{3}{4} \\ - \end{array}$	- 1 1	1 103 1 8½	1 2 1 2	$\begin{vmatrix} 0 & 12 \\ 1 & 2\frac{3}{4} \\ 1 & 4 \\ 1 & 5\frac{1}{2} \end{vmatrix}$
1922 1923 1924 1925	Dexters	1 1 1	$\begin{array}{c} 0 & 12 \\ 0 & 10 \\ 0 & 13\frac{1}{2} \\ 1 & 10\frac{1}{4} \end{array}$	2 1 —	0 13 0 10 —	<u>-</u> -	1_2	$\frac{-6}{2}$	0 15
1925	Three times Milkers	3	1 111	1		_			

TABLE IV.—COMPARISON OF CHURNINGS WITH ANALYSES.

### SHORTHORNS.

No. 11 ('atalogue		of Butter rned.		Fat by alyses.	No. in Catalogue		of Butter rned.		Fat by lyses.
3 4 5 6 8 10 11 27	lbs. 2 1 1 2 2 2 1	ozs. 334 8 612 6 1114 3 0 14	lbs. 2 1 1 2 1 2 2 1	ozs.  7½ 11 9¾ 6 11 11 4 15	28 41 54 71 72 77 84	lbs. 1 1 1 1 0 1 2 1	ozs. 4 13 8 \\ 11\frac{1}{2} 10 4 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4	lbs. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ozs. 6 14½ 6¾ 1 15 0 6½
					1	25	12	28	13
		Τ	JINCOI	LN REI	D SHORTE	IORNS.			
104 106 107 108	2 2 2 2 2	113 5 11 01	2 2 2 1	11 7½ 10¾ 14	111 113 115 117	2 1 2 1	$4\frac{1}{2}$ $12\frac{1}{4}$ $6\frac{1}{2}$ $13\frac{1}{4}$	2 2 2 1	$10$ $4$ $7\frac{1}{2}$ $12\frac{1}{4}$
109 110	1	13‡ 0‡	1 11 1 2		20	141	21	10	
			Ві	RITISH	FRIESIAN	ıs.			
131 133 134 136 137 138 139 141 142 145	1 1 2 1 3 1 2 1 1 1	$ \begin{array}{c} 10 \\ 1 \\ 1 \\ 1 \\ 8 \\ 1 \\ 10 \\ 6 \\ 4 \\ 3 \\ 1 \\ 1 \\ 5 \\ 1 \end{array} $	1 2 1 3 2 2 2 2 2 1	143 8 9 101 1 5 12 1 2 61	148 151 158 159 160 162 163 164 171	2 2 1 2 1 2 2 2 2 1	4 54 54 14 5 5 5 7 5 5 7	2 2 1 3 1 2 2 2 2	15 91 144 2 143 2 31 6 31
	1		1			37	03	43	113
				South	DEVONS		~ *		
187	1	133	1	131	189	3	$2\frac{3}{4}$	3	2
			1			5	01	4	151

248

1 11

1 15

251

33

143

 $81_{2}$ 

 $7\frac{1}{2}$ 

2

### TABLE IV.—COMPARISON OF CHURNINGS WITH ANALYSES—Continued.

### DAIRY SOUTH DEVONS.

No. in Catalogue.   Weight of Butter Churned.   No. in Catalogue.   Weight of Butter Churned.	Total Fat by Analyses.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	lbs. ozs.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccc} 1 & 7\frac{1}{2} \\ 2 & 9 \\ 2 & 12\frac{1}{4} \\ . & 1 & 6\frac{1}{2} \end{array}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16 01
10 4½	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	13 01
Blue Albions.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccc} 2 & 11\frac{3}{4} \\ 2 & 13\frac{1}{2} \end{array} $
- 72	12 7
Welsh Blacks.	

Table IV.—Comparison of Churnings with Analyses—Continued.

Ayrshires.

		AYRS	HIRES.		
No. in Catalogue.	Weight of Butter Churned.	Total Fat by Analyses.	No. in Catalogue.	Weight of Butter Churned.	Total Fat by Analyses.
252 253 254 255 256 257 259 260 261 264 265 269 270 271 272 275	lbs. ozs. 2 5 2 6 2 9 1 4 1 11 5 4 2 5 4 1 5 1 5 1 5 1 9 1 4 2 8 4 1 1 2 3 1 1 2 3 1 1 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 2 1 5 4 3 1 5 4	lbs. ozs. 2 734 2 104 2 14 1 124 2 734 2 9 2 7 1 434 1 91 2 13 2 514 2 13 2 524 2 123 2 512	276 277 278 279 280 284 286 287 288 289 291 291 293 294 295 296	lbs. ozs. 1 $8\frac{3}{4}$ 1 $9\frac{1}{2}$ 1 $14\frac{1}{2}$ 1 $14\frac{1}{4}$ 1 11 1 2 2 $4\frac{1}{4}$ 1 $8\frac{1}{2}$ 2 $0\frac{1}{4}$ 1 $10\frac{3}{4}$ 1 $10\frac{1}{4}$ 1 $14\frac{1}{2}$ 1 $14$	lbs. ozs. 1 $11\frac{1}{2}$ 1 $10\frac{1}{2}$ 1 $14\frac{1}{2}$ 1 $14\frac{1}{2}$ 1 $14\frac{1}{2}$ 1 $10\frac{1}{2}$ 1 $10\frac{1}{2}$ 1 $10\frac{1}{2}$ 2 $0\frac{1}{2}$ 2 $0\frac{1}{2}$ 1 $10\frac{1}{2}$ 2 $0\frac{1}{2}$ 1 $10\frac{1}{2}$ 1 $101$
		Guer	NSEYS.		
298 299 306 307 308 309 312 314 316	$\begin{array}{cccc} 0 & 10\frac{1}{2} \\ 1 & 6\frac{1}{4} \\ 2 & 6\frac{1}{4} \\ 1 & 8\frac{3}{4} \\ 1 & 8 \\ 1 & 5\frac{3}{4} \\ 1 & 14\frac{1}{2} \\ 1 & 8\frac{3}{4} \end{array}$	1 444 1 2 643 1 994 1 754 1 1 153 1 1 94	317 318 319 321 322 325 329 330 336	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	i i	1		27 13	28 81
		Jersi	eys.		
337 338 339 341 342 343 344 349 350 351 353 356	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	357 358 359 362 366 367 371 378 381 385 389 391	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
				44 71	43 143
	1	1	- 11		1

TABLE IV.—Comparison of Churnings with Analyses—Continued.

### KERRIES.

394 2 395 2 397 1 398 2	ozs. 123 03 03 5 03	lbs. 2 2 1 1 1	ozs. 13½ 3¼ 8 12¾	399 405 406	lbs. 2 1 1 1 1 1 3	ozs. 63 6 103 103	lbs. 2 1 1	ozs. 634 634 13
418 1	07	I			13	101	14	0
		D	DYTED					
	$\begin{array}{c} 2\frac{1}{4} \\ 4\frac{1}{4} \end{array}$	1	2 5 <u>1</u>	421	4	101/4	3	8½ 15½
						03	3	151
426 1	10	1	EE TIM	ies Milk	ERS.	103	1	12
427		$\frac{2}{2}$	43	+34		104		

Table V.—Average Differences between Churnings and Chemical Analyses from 1898.

	· · · · · · · · · · · · · · · · · · ·		-		
1				Lbs. Butter	Lbs. Fat
From 1898 to 1915	Shorthorns			40.79	43.72
1919	.,	•••		43.86	42.40
1920	,,			$51 \cdot 25$	52.57
1921	,,			94.84	112.69
1922				$61 \cdot 26$	71.69
1923	77			65.15	71.94
1924	17	•••		$35 \cdot 02$	36.15
1925	,,			25.75	28.81
1929	33 ***	•••		25 10	20.01
From 1907 to 1915	Lincolnshire				
1	Red Sh	ortho	rns	12.01	11.77
1919	,, ,,	**		7.47	$7 \cdot 15$
1920	" "	,,	1	5.37	5.81
1921	" "	"		12.77	13.01
1922	1) ))	,,		$15 \cdot 62$	14.96
1923	37 77	"	-	16.90	19.72
1924	99 99	"		$14 \cdot 06$	12.98
1925	"	"		20.89	21.62
1914	British Friesian	ıs		1.20	1.69
1915	**			3.50	4.00
1919	"			$3 \cdot 31$	3.33
1920	"			27 - 10	29.06
1921	"	•••		21.81	25.18
1922	"	•••		38.87	44.50
1923	77 27			$22 \cdot 92$	$27 \cdot 32$
1924	"	•••		40.37	46.74
1925	"			$39 \cdot 05$	43.73
1020	13	•••		<b>00</b> 00	20 10
From 1909 to 1915	South Devons			8.12	8:69
1921	"	•••		9.46	10.50
1922	"			$9 \cdot 25$	9.71
1923	"	•••		6.62	7.13
1925		•••		39.04	4.95
1020	"	•••		90 ()I	1 55
1925	Dairy South D	evons		2.28	2.31

Table V.—Average Differences between Churnings and Chemical Analyses from 1898—Continued.

Year	Breed	Churn	Analyses		
1919 1920 1921 1922 1923 1924 1925	Devons	3.94 11.58 11.69 9.51 4.97	Lbs. Fat 8 · 10 3 · 59 12 · 73 12 · 72 9 · 88 5 · 76 16 · 02		
From 1898 to 1915 1919 1920 1921 1922 1923 1924 1925	Red Polls	15·98 27·06 28·33 21·07 25·12	10·62 18·83 18·89 29·98 35·61 24·15 28·36 13·04		
1924 1925	Blue Albions	7·76 10·27	8·92 12·43		
1922 1925	Welsh Blacks . " " .	7·30 3·92	6·70 4·47		
1910 1912 1921 1922 1923 1924 1925	Ayrshires	5·37 4·62 27·85 30·19 30·52	1.75 5.89 4.69 31.52 32.95 35.15 65.36		

Table V.—Average Differences between Churnings and Chemical Analyses from 1898—Continued.

Year	Breed	Churn	Analyses
		Lbs. Butter	Lbs. Fat
From 1898 to 1915	Guernseys	7·11	7.17
1919		$23 \cdot 72$	23.66
1920	,,	21.23	21.62
1921	**	28.94	28.87
1922	**	22.46	23.14
1923	,-	7.0.00	16.78
1924	"	0= 00	25.60
1925	"		28.51
1323	,,	27-11	26.91
7000 : 1015	<b>T</b>	90.07	20. 42
From 1898 to 1915	•	30.67	29.42
1919	,,	37.44	35.18
1920	,,	25.06	24.55
1921	,,	$\dots$ 29.75	$28 \cdot 50$
1922	,,	43.22	$42 \cdot 05$
1923	,,	$41 \cdot 38$	$41 \cdot 40$
$1924 \dots$	,,	59 · 18	58.87
1925	,,	$44 \cdot 45$	$43 \cdot 92$
1907 1908 1909 1911 1913 1919 1920 1921 1922 1923 1924 1925		3·40 6·89 2·75 1·21 5·94 4·66 11·50 18·78 14·14 10·81 13·66	3·19 7·09 2·64 0·96 6·10 4·64 11·48 21·96 13·57 *9·75 13·75 14·00
1919 1920 1921 1922 1923 1924	Dexters	5.77 3.96 2.06 2.52 6.90 1.97 4.05	5.58 3.84 2.50 2.77 6.76 2.11 3.96
1925	Three times Milkers	5-11	6.66

<sup>\*</sup> Does not include the fat of No. 466.

# BUTTER TESTS-SHORTHORNS.

		J					•′				
Awards	1	lst Prize & (t.B. Nel- son Cup.			R & H.C.		H.C.	H.C.	H.C.		
to technical	Y IstoT	(400d 35-75 10-40 46-15	24.00	22.50	0.1038.10	0.10 27.35	35.00	32.00	30.00	1.90 21.90	29.00
rol strioq noits:	No. of Lact	10 - 40	l	!			1		1	1.90	1
f Points Butter	o .o.V 101	35 - 75	24.00	22.50	Good 38.00	27.25	35.00	Good 32.00	Good 30.00	Good 20.00	29.00
and lity itter	Quality	(400d	Fair	Good	Good	Fair	Soft	Good	Good	Good	Fair
Colour and Quality of Butter	Colour	Pale	Fair	Fair	Fair	Good	Good	24.0 Good	Pale	Good	Fair
viz., Ibs. ibs. Butter	Ratio,	23.6	27.6	37.0	24 5	77·1	93.0	24.0	29.0	21.9	25.6
bleiY 1	Butte	<b></b>	œ	63	ဗ	П	ec .	•	14	<del>-</del>	13
	al	102	-5		7	- <del></del>	- 27	0	51		41 13
eld	Morn. Even. Total		0 1	0 52	13 58	1041	8+9	2+8	1354	0 27	246
Milk Yield	Even.	76 60	619	025	10 26 13	14 18 10			8 27 1	614	221
W	orn.						11 23	1421			
%s in Milk		<u>\$</u>	34 22	22 27	4131	41 22	13 24	15 26	24 26	59 13	30 25
		28.1		27	œ	00	9	4	25	22	
Date of	Tage 1	1925. May 2814428	Sept. 15	Sept.	Sept.	Sept.	Oct.	Oct.	Sept.	Aug.	Sept. 19
j		1920	July 15, 1918	Nov. 13, 1918	April 15, 1920	[748] Jan. 25, 1919	June 16, 1918	1381 Aug. 19, 1917	1, 1921	28, 1921	Nov. 25, 1920
Date of		25,	, 15,	. 13,	11 15,	25,	۴ 16,	. 19,			. 25,
, <b>"</b>	İ	Jan.	ժակ	Nov	Apr	Jan.	Jun	Aug	Dec.	Oct.	Nov
Weight	Live	lbs. 1368	1221	1299	1186	1748	1230	1381	1280	let 1376	1428
Name of Animal		Rickerscote Foggathorpe	Barrin	Wild Eyes Lady	Penco	Bickerscote	Kingsthorpe Countess Ruby	Hutte	Sudboroug	Kinglet Spotless 45th	Thornby Lady Windsora
Exhibitor		Major S. P. Yates	E. A. Smith	E. A. Smith	T. P. Preece	J. Pierpon	F. H. Thornton	T. L. Martin	Viscount Feilding	Col. Spence- Colby, C.M.G.,	
Satalogue	ni .oN	ಣ	7	10	9	œ	10	11	27	58	7

BUTTER TESTS—SHORTHORNS—Continued.

	Awards.					H.C.		2nd Puze	H.C.	3rd Prize	H.C.	H.C.		r
to redmi	oV late toT	T	24.75	2.4013.90	26.00	36.00	20.25	43 - 75	37.00	43.00	3.7036.20	4.6033.85	16.25	
oints for action	o of P	· ·	4	3.40	1		-	1	1	1	3.70	4.60	l	
Points utter	Yo. of for Bu		Good 24.75	11.50	36.00	36.00	20.25	13.75	Good 37.00	13.00	32.50	29.25	16.25	
r and lity itter	rapity	ъ	Good	Poor	x <sub>Off</sub>	Soft	Firm	(tood		Good V. Good 43 · 00	Firm	V. Pale V. Firm 29 · 25	Fair	
Colom and Quality of Butter	nolo	າລ	Pale	Pale	Pale	Pale	Pale	Good Good 43-75	Good		Pale	V. Pale	Fair	
ız., lbs. bs. Butter	Ratio, v	K	20.9	56.1	28.5	27.6	31.3	25.6	2.4.7	25.3	8.72	8.4.8	38.8	
plei7	Butter	be ozs	3C ∞↔	113	10	+	+	I I E	5	Π	ř.	131	0	
	Total	Soze		-3-	51	13.2	8	22	52	0.5	122	==	Ξ	~
jeld		SZS IDS	11.32	0+0	13 46	0 62	14 39	10 70	257	890	10 55	13-43	1439	
Milk Yield	I. Even.	be ozs lbs ozs lbs ozs lbs	10 13	617	8 19	13 28	10 18	831	325	030	224	14 19	3 16	_
	Morn.	lbs oz	60 18 10				20 1							
aliM ni s	ot Day	ox		6423	34 26	2634	21	33 38	21 32	22.38	7731	8623	23 22	
ţ,	Calt		25.	. 16	Sept. 15	f. 23	t. 28	f. 16	£. 28	b. 27		25	i. 26	
Date	last Calf		1925. Aug. 2	Ang.	Sept	Sept.	Sept.	Sept.	Sept.	Sept.	Aug.	July	Sept.	
E		1	923	922	30, 1923			916	1920	1920	26, 1918	3, 1918	5, 1919	
te of	Birth		<del>1</del> ,	26, ]	30, ]	1915	921	14, 1	22, ]		26, ]		5, ]	
q	M	,	April 4, 1923	Sept. 26, 1922	Jan.		_	Mar. 14, 1916	Aug.	Aug.	May	June	May	
dight	W 9viJ		lbs. 962	1182	1114	rd 1592	1256	1449	1332	1229	1549	1559	1479	_
	Name of Animal		Barrington Lucy	Longhills Briar	Longhills	Darlington 3 Spot	Fanny	Burton Amy 7th	Burton Ethel 8th	Burton Hempy	6th Scothern Mystic	Scothern	Merrymaid Scothern Betty 3rd	~ -
			:	:	:	:	:	n	-:- a	n	:	÷	:	
	Exhibitor	a a supplementaria	T. I., Martin	E. A. Smith	E. A. Smith	A. B. Croxon	J. Day	J. Evens & Son	J. Evens & Son	J. Evens & Son	B. G. Bowser	B. G. Bowser	B. G. Bowser	
talogue	o. in Ca	N	54	71	72	77	84	104	106	107	108	109	110	-

BUTTER TESTS-SHORTHORNS-Continued.

Awards.		H.C.		4th Prize		
lumber of sints	Z IntoT 94	36.50	0.2028.45	38.50	29.25	
Points for fation	No. of l	1	0.20	l	1	
Points Butter	o oV ioi	36.50	28.25	38.50	29.25	
Colour and Quality of Butter	guality.	Soft	Soft	Good	23.6 Good Firm 29.25	
Colou Qualii But	Colour	Fair	Pale	Good	Good	
viz., Ibs.	Ratio, Milk to li	27.3	32.6	23.2	23.6	
er Yield	tdua Z	4	1 124	2 63	1 134	
	otal	24 27	7 61	3 6 2	3 21	
Milk Yield	Morn. Even. Total	9 2 62	6 6 57	5 14 53	0 13 43	
Mill	orn. E	2 20	0 26	8 25	2 20	
ys in Milk		20/33	42 31	31 27	39 22	
Date of	last Calf	1925. Sept. 29	Sept. 7	Sept. 18	Sept. 10	
Date of	irth	Sept. 23, 1920	Sept. 29, 1921	Jan. 25, 1918	10, 1917	
Ã.	<b>#</b>	Sept.	Sept.	Jan.	Dec.	
ydgi∍V	V Svi.I	lbs.	1084	1253	1272	
Neme of Animal	AMILIO OLI TALINITO	Langford Castle	Langford Norman 1084	Langford Queen 7th	Flamville Dairy- maid 120th	
H.		1 Little Green Estates Co.	Slade & Merton	S. Reading	7 J. O. Burchnall	
sugolstat	No. in C		113	115	117	

BUTTER TESTS-SHORTHORNS-Continued.

	a in the second	1	Buttermilk, when churn- ing finished	Degrees 5.1	7.75	55	53	53	57	55	五	54	55	770	7.5	古	53	15	111	51	15	52	10		54	72	52	古
	URE	Temperature	Cream and Churn	Degrees 52	55	52	52	52	52	52	52	52	55	52	52	52	52	52	52	55	525	55	55	55	52	52	52	52
χ <b>α•</b>	D TEMPERAT		Dairy	Degrees 56	20	56	99	56	26	99	56	56	56	56	56	56	57	57	57	57	57	57	57	57	57	57	57	57
CITATIO TATO CONTINUES	CHURNING-TIME AND TEMPERATURE		Duration of Churning	Minutes 30	23	55	25	46	<u>و</u>	77	16	16	12	15	40	55	18	50	25	17	96	20	35	200	18	24	18	33
TOTE OTATATOR	CHURNI	Time	Churning finished	9 43 a.m.	33	ΣĢ	9 35 "		9 35	9 41 "	9 36 "	9 35	. 0e 6				9 58 ,,										10 35 ,,	
CTOPT TTO	monomorphic and the second sec		Churning began	9 13 a.m.	9 10 ,,	9 10 "	9 10 "	9 14 ",	9 15 "	9 17 "	9 20 ,,	9 19	9 18	9 20 "	9 22 ,.	9 23 "	9 40 "	9 47 "	9 47 "	9 48		9 55 "	10 01	10 0 "		10 12		10 12 "
1				:	:	:	:	:	nd	:	:	:	:	:	:	:	:	:	;	:	:	:	:	:	:	:	:	-
and the second s		Name of Animal		Rickerscote Foggathorpe	Barrington Empress 3rd	Wild Eyes Lady	Pencoyd Blanche 2nd	Rickerscote Rosannah	Kingsthorpe Countess Ruby 2n	Hutton Daffodil 2nd	Sudborough Ringlet	Spotless 45th	Thornby Lady Windsora	Barrington Lucy	Longhills Briar	Longhills Darlington 3rd	Spot	Fanny	Burton Amy 7th	Burton Ethel 8th	Surton Hempy 6th	Scothern Mystic	Scothern Merrymaid		Langford Castle 5th		Queen 7th	Flamville Dairymaid 120th
		No. in Cata- logue		က	4	10	9	90 ;	2;	T :	27	æ:	4.1	54		2 !		70	104	907	107	807	607	110	111	113	115	1117

	•	L 18	e wun	$y \sim$	now	DU	wer	1 68		19	40.			
	Awards	1					1st Prize		3rd Prize				H.C.	H.C.
-	Total Number of Points		26.50	27.00	33.00	24.50	1.20 50.20	26.00	3.5041.75	5.1024.60	27.00	3.7024.95	36.00	37 - 75
-	No. of Points for Lactation		1		-	Ţ		i	3.50				l	1
•	No. of Points for Butter	,	26.50	27.00	33.00	24.50	00.61	3e·00	38.25	19.50	27.00	21.25	Good 36.00	Good 37.75
•	ter ter grand	)	Fair	Soft	Soft	Firm	Soft	Xoff.	Soft	Noft	(food	Soft	Good	Good
	Colour of Cuality Suality and Suality Suality	) )	Good	Pale	Pale	Pale	Good	Faur	Pale	Pale	Fair	Good	30.5 V. Good	27.4 V. Pair
	Ratio, viz , lbs.	ζ.	31.0	30.08	36.2	32.6	55.75	27.7	31.4	35.9	34.1	36.7	30.5	27.4
x.	Butter Tield	5Z0 80	101	П	~	3C	_	10	6	5.C (c)1	Π	$5^{1}_{4}$	<del>-1</del> 1	5.5 cop4
AN		Z-	- 2	===	=======================================	<u></u>	2.1 2.5	1	- 37	131	$\frac{7}{8}$	11 1	13 15	<u>₹</u>
SI	d Total	98.0	92.0	99.0	077	9	98	<u>12</u>	575	C # 0	2.7	8 48	89	99
KII	Yield	Ozs	<del>-</del>	5		10 50	13 68	11,45	10	Ė	10 57	×	दर	9
SHF	Milk Yield Morn, Even	the ozellbs ozellbs ozellbs ozs	527	1331	10 32	8 61	528	621	=======================================	13/20	14/27	319	11 30	8
E	Mo	<u>.</u>	29 29	1735	38 42	25 27	52 39	23	75 41	53	40 29	65	20 38	19 34
BR	of Days in Milk	N						21		91		77		
TESTS—BRITISH FRIESIANS.	Date of ast Culf		1925. Sept. 20	Oct. 2	Sept. 11	Sept. 24	Aug. 28	Sept. 28	Aug. 5	July 20	Sept. 9	Aug. 3	Sept. 29	Sept. 30
TE	I st	_	-									-		
BUTTER	Date of Birth		25, 1917	5, 1917	17, 1917	10, 1919	27, 1919	31, 1918	, 1915	24, 1916	June 12, 1919	Nov. 10, 1918	ght 1376 Nov. 18, 1919	1262 Dec. 30, 1918
T	jo o	)	50		17				÷	2.5	12	10	18	30
B(	Dat	1	Nov.	Sept.	Oct.	Jan.	June	Mar.	Oct.	Oct.			Nov.	Dec.
	Live Weight		lbs. 1462	1534	1308	1405	ud 1360	1341	1417	1527	1334	1278	1376	1262
,	Name of Animal		Terling Torch	Eastern Nancy 1534	Walden Lena	Knebworth ('esar's 1402	Rosebud Haydon Pax	Glen Cameo	Felhampton	Susan Beceles Gloria	Munt	Troublesome Brooklands	rrincess Flashli Hamels Beryl	Bulkeley Helen of Troy
		_	:	:	:	it it	Þ	:	:	:		Sons	;	lay
	Exhibitor		Lord Rayleigh	Lord Barnby	Lord Barnby	W. H. R. Gilbert	The Hache Herd	A. Allen	S. Pyman	B. Parkinson	W. G. White	& Sc F. Sykes	E. Furness	I. B. & H. L. Jarmay
	in Catalogue	ī	131	133	134	136	137	38	139	Ŧ	142	145	148	[5]

-Continued.	
FRIESIANS	
-BRITISH	
R TESTS	
RITTER,	

•	Points  Avards				Н.С.	H.C.	3.50/39.75 4th Prize	R.&H.C.	8 · 40 45 · 65 2nd Prize				
-	imber of	rZ lato' ito¶	L	21.75	37.50	30.00	39 - 75	88.25		23.50			
-	tof atrio roits	io. of P Lack	·		!		3.50	0.50	8.40	1	***************************************	The state of the s	
-	Points utter	No of for B		24.75	37.50	30.00	36.25	37 - 75	37.25	23.50			
	and y of er	Lalify	ъ	Soft	Soft	Good 30.00	Firm 36 · 25	Good	. Good	Soft			OPPRIOR.
	Colour and Quality of Butter	nolo	າວ ຸ	Pale	Pale	Fair	(tood	25.9 V. Good Good 37.75 0.50 38.25	27.2 V. Good V. Good 37.25				
eu.	iz., Ib <b>s.</b> s. Butter	Ratio, v	ik I	51.9	20.5	30.2	20.8 Good	25.9 V	V 2.72	51.1 Good			*****
ntrut	Vield	Butter	8 OZB	30 EM	52	11	<del>- H</del> m-ń	55	$5^{1}$	<u> </u>			
3 :		tal	ozs Ib		<del>21</del>	11	<u>භ</u>	2 2	63	0 1			
FRIESIANS—Continued	Tield	n. To	sq Ips	14 80	8#0	11 56	5 47	8 61	3 63	2 75			
3	Milk Yield	Evel	allbs o	832 1	3 <del>-1</del>	024 1	1425	1030	025				
X X	-	Morn. Even. Total Even. The ozs the ozs					11	01 08		20 39 14 35			
Z :	alik ai e	of Day	;	26 47	24 24	31 32	75 21	45 30	124				
BUTTER TESTS—BRITISH	Date of	last Calf		1925. Sept. 23	Sept. 25	Sopt. 18	Aug. 5	Sept. 4	June 17 124 38	Sept. 29			
ENTR					921	922	126	921	5, 1920	920			
Z	fo et	Birth	,	14, 1	26, 1	30, 1	28, 1	13, 1	5, ]	20, 1920			
TIE	Ě	, m		Aug. 14, 1921	April 26, 1921	June 30, 1922	Jan, 28, 1921	Nov. 13, 1921	Dec.	Dec.			
<u> </u>	tdgie	W eviJ		lbs. 1432	1497	nd 1378	1602	1456	1586	1334			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Name of Animal		Reddown Crocus, 1432	Jund (imp. 1922) 1497	Blanche zznd Lund Juliet	Hache Akkar	Virtue Hache Vespers 1456		Emily Winchester Musk 1334			
		Exhibitor		E. Hollingworth	C. W. H. Glossop	C. W. H. Glossop	The Hache Herd	The Hache Herd	B. Parkinson	W. Twentyman			
	an gols:	ao ai .	N	158	159	160	162	163	164	171			7

BUTTER TESTS-BRITISH FRIESIANS-Continued.

			СПОКУ	CHURNING—TIME AND TEMPERATURE	ID TEMPERA	rure	
No. m Cata-	Name of Animal	Production to the control of the con	Time	2 1 1 1 1	† :	Temperature	
		Churning began	Churming	Duration of Churning	Dairy	Cream and Churn	Butternifk, when churn- ing finished
131 138 138 137 138 139 141 142 148 151 160 160 163 163 163	Terling Torch 13th  Bastern Nancy  Walden Lena  Knebworth ('esar's Roschud  Haydon Pax  Glen ('ameo  Felhampton Susan  Beceles Gloria  Muntham Troublesome  Brooklands Princess Flashlight  Hamels Beryl  Bulkeley Helen of Troy  Reddown Crocus 3rd  Lund Blanche 22nd  Lund Juliet  Hache Akkar Virtue  Hache Vespors  Thurston Karel's Emily  Winchester Musk	10 20 33 32 11 10 20 33 11 10 20 33 11 10 20 33 11 10 20 33 11 10 20 33 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 20 34 11 10 34	10 352 a m. 10 52 a m. 11 53 a m. 11 53 a m. 11 53 a m. 11 54 a m. 11 55 a m.	Minutes 15 15 15 15 15 15 15 15 15 15 15 15 15	Degrees 67 67 67 67 67 67 67 67 67 67 67	0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 20 20 20 20 20 20 20 20 20 20 20 20 20

BUTTER TESTS-RED POLLS.

	2700	Dang Show Danel 1850 of 1020.	100
	Awards	Fair     31.25       Soft     25.25       Firm     30.75       Good     26.25       Firm     24.25       O·602+85       Good     26.75       4.1030.85     2nd Prize	,
	to tedanna letoT etatoA	Faur 31.25 — 31.25 Soft 25.25 — 25.25 Frum 30.75 — 30.75 Good 26.25 12.0038.25 Frum 24.25 0.6021.85 Good 26.75 4.1030.85	
1	No. of Points for Lactation	13.00	
1	atnioq to oZ retter	31.25 25.25 30.75 26.25 26.75 26.75	
,	Quality :	Faur Soft Furm Good Firm Cood	1
	Colour and Colour and Colour and Colour and Colour	Fair Good Pale Pale Fair	
1	Ratio, viz., Ibs.	31.6 41.6 18.1 27.6 29.1 24.6	
	Butter Yield	16. 10. 88. 10. 10.	
	k Yield  Even. Total lis ozsilbs o.s	11 13 1 4 13 1 1 2 1 2 1 1 3 1 3 1	
	Milk Yield  n. Even.	8 8 61 0 5 5 5 5 6 5 6 6 6 7 13 3 4 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1	Mik Yield  Morn, Even, Total lis ozs lik ozs libs oz	3 558 5 530 5 3 20 1 1 4 20	
	No. of Days in Milk	1 28 35 33 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Date of last Calf	1925, Sept. 14 Sept. 18 Sept. 21 Oct. 1 May 1 Sept. 3 July 30	
	ilrth	24, 1919 24, 1919 18, 1916 1, 1916 22, 1922 4, 1922	
	Date of Birth	April 2, 1919 Sept. 24, 1919 Feb. 18, 1916 Oct. 1, 1916 Feb. 22, 1922 Sept. 4, 1922	
	D.		
	Live Weight	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Name of Animal	Spalding Pearl 1176 Hutton Dahlia 1280 2nd Harefield Ruth 1202 Tendring Floss 1506 Shotford Lady 1219 Mary 5th Saham Darker 1306 Draught	
	Exhibitor	1 Major J. A. Morrison, D.S.O. 2 Major J. A. Morrison, D.S.O. 3 Major J. A. Morrison, D.S.O. 5 W. Scrimgeour 2 J. B. Dimmock 9 C. F. Newton	
	No. in Catalogue	211 212 213 213 215 222 229	

BUTTER TESTS-RED POLLS-Continued.

The said from the	The Court of the C	***************************************						
				CHUR	CHURNING—TIME AND TEMPERATURE	ND TEMPERAT	URE	
No in Cata- logue	Name of Animal			Time		m canno i	Temperature	
			Churníng began	Churning finished	Duration of Churning	Dairy	Cream and Churn	Butternalk, when churn- ing finished
211	Spalding Pearl	:	12 4 p.m.	12 30 p.m.	Minutes 26	Degrees 57	Degrees 52	Degrees 53
212	Hutton Dahha 2nd	:	12 20 "	12 45 "	35	57	52	54
213	Harefield Ruth	:	12 10 "	12 55 "	45	57	52	7.9
215	Tendring Floss 29th	:	11 55 а.т.	12 27 "	35	57	52	51
222	Shotford Lady Mary 5th	:	12 10 p.m.	12 30 "	06	57	55	72
229	Saham Darker Draught	:	12 17 "	12 36 .,	19	57	52	53

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The Carried Day	1	
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The second secon		
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-	Awards	H.C.	H,0	R.&H.C.	H.C.	H.C.		3rd Prize			н.с.		н.с.
to 19dmi sta	IN IstoT ioq	37.00	38.00	41.25	3.0030.75	37.75	20.25	1.4042.15	0.1021.90	0.2021.70	35.50	25.25	2.00 32.00
toi sinio noite	Yo. of P. Lacts	I	1	1		I	1					Ī	00·ଟ
Points utter	to .oZ a rot	37.00	38.00	11.25	27.75	37.75	20.25	10.75	21.50	21.50	35.50	25.25	30 00
Colour and Quality of Butter	Quality	(Hood 37-00)	V. Good 38.00	(food 41.25	Good	Fair	Soft	Good 10.75	Good	Į.	Soft	(tood 25.25	Soft
Colou Qua of B	Colour	Good	Fair	Fair	Fair	Pale	Fair	Ctood	(tood	Good	Pale	Fair	Pale
viz., Ibs.	Ratio, 7	24.3	22.8	22.0	25.7	30.5	£8.3	20.3	38.3	34 · 1	28.4	30.5	43.7
Yleld	Butter	70	9	91	E P	5.4	7	30 84	10	57	377	91	#
	ozs]11	- 5	22	102	- 20	-17	3	-21	+1	121	27	-5-	<u></u>
Yield	n. T(	2 56	10-54	10 56	544	10 72	11 61	351	1451	245	263	8 48	2.78
Milk Yield	Morn, Even, Total by ozslibs ozslibs	326	8124	0.24	320	1332	8.29	8 22	621	10 19	1428	14.22	031
Le in Milk	Xo. of Da	1830	3229	3832	10,54	34,39	17.31	5429	44 29	42.26	3134	36 25	60 47
Jo	alf	1	. 17	Ξ.	2	. 15	<b>∵</b> 1	56		ı~	81.	. 13	20
Date of	last C	1925 Oct.	Sept. 17	Sept.	Aug.	Sept.	Oct.	Aug.	Sept.	Sept.	Sept. 18	Sept.	Aug.
-	P	1921	28, 1920	3, 1921	4, 1917	1917	1921	27, 1920	1917	20, 1916	6, 1919	15, 1918	3, 1917
Date of	Sirth	1 28,				્યું	લ્યું		ا			15,	
1 9		April 28, 1921	Jan.	Feb.	Mar.	Mar.	May	Mar.	Mar.	Feb.	Aug.	Mar.	$A_{\mathrm{pril}}$
tdgl9\	V svi.I	lbs. 1208	1358	1025	1120	1440	1116	6th 1069	1103	1305	1402	1204	1316
	Name of Aminal	Catlinns Belinda	Netherton Queen	Cargen Holm December 401		Dalpeddar Flora	Rigg Rosie	Greenan Kate 6th	Midkelton Miss	Drown Craigraploch Carce 1305	Round Bush	Lessnessock	ramie Millantae Mayflower
	Tagar.	Catli	Neth	Carg	_						Rom	Less	
Walifi Alexa	LALIDIROI	Sir T. F. Buxton	LtCol. R. E.	Major C.	Major C.	A. & A	O. D. Maxted	Q. Dunlop	J. R. Miller	T. Dunlop	F. H. Sanderson	W. J. Thompson	J. Johnstone
etalogue	No. in C	252	253	254	255	256	257	259	260	261	264	265	269

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RITTTER TESTS-AYRSHIRES-Continue
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BUTTER TESTS -AYRSHIRES-Continued.

Awards	11.0.		H.C.				H.C.	ще.				
Total Number of Points	36.25	24.50	32.25	26.75	26.50	26.25	30.50	30.00				ne-reason such
No. of Points for Lactation	i			1	1	Ī		1				
No. of Points for Butter	36.25	24.50	Good 32.25	26.75	26.50	Good 26.25	30 50	30.00	_			
Odour and Quality of Butter	V. Good 36.25	Good	(†00d	Pair	Good	Good	Firm	Firm				
Colour an Quality of Butter	ے ۔	25.9 V Good Good 24.50	Fair	V. Fair	Кап	Pale	Pale	Pale				against the same
Ratio, viz., lbs. Milk to lbs Butter	,		20.8	5.05 5.05	26.9	24.5	2. F.	24.5	-			-
Butter Yield	41	S 21	0,1	103	103	101	17	7			-	
id Total	12.2	131	152		- <del>-</del> 5-	- <del>2</del>	====	-0-				***
Milk Yield Even. T	10-50	339	1341	8.33	3+3	640	1441	9+0	and a second			Made to
Milk Yiel	223 1050 122	10117	2 18	015	3.19	13,18	217	0.20	- •	-		
o. of Days in Milk	727	18 22	28 23	15 18	38,24	34 21	20 23	39 26			-	
of	.22	_	22	+	=	. 15	29	. 10				
Date of last Calf	1925. Sept. 22	Oct.	Sept.	Oct.	Sept.	Sept.	Sept.	Sept.				
irth	28, 1922	Feb. 14, 1923	Dec. 18, 1922	5, 1922	30, 1923	25, 1922	Nov. 16, 1922	1923				
Date of Birth	28,	14,	18,				16,	10.				
Date	Aug.		Dec.	Sept.	Jan.	Oct.		Mar, 10, 1923				
tdgisW svi.I	lbs. 1310	1025	1020	1248	1050	1175	1012	1200				
Name of Animal	Byreholm Vip	Byrcholm	Diamond Byrcholm Dazzler 1020	Dunlop Sunlight	Kilfillan Fillet	Douglas Hall	Douglas Hall	Janet Ann 2nd Lessnessock Daivy Chain 4th				
Exhibitor	J. Cochrane	J. Cochrane	J. Cochrane	Mrs. H. Craufurd	3 H. J. Clark	M. Sloan	M. Sloan	8 A. W. Montgomerie		an an		The second of th
Mo, in Catalogue	287	288	289	291	293	294	295	296				1

BUTTER TESTS—AXRSHIRES—Continued.

3		ature	n Butternilk, when churn- n ng finished	Degrees 52 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	) TEMPERATURE	Temperature	Gream and Dary Churn	Degrees Degrees 577 52 52 53 52 53 52 53 53 53 53 53 53 53 53 53 53 53 53 53
The second secon	CHURNING-TIME AND TEMPERATURE	1	Duration of Churning	Minutes 116 27 17 17 17 17 17 17 17 17 17 18 20 20 20 20 20 20 20 20 20 20 20 20 20
CENTRAL PROPERTY CO.	CHID	Time	Churning	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
OTOTT ATTTAC			Churning began	69999999999999999999999999999999999999
Ž		Money of Animal	Availed Of Arithmed	Catlimus Belinda Notherton Queen Greenfield 4th Cargen Holm Proud Lady 8th Grange Pansy 6th
		No. in	logue	252 254 255 255 255 255 255 255 255 255

BUTTER TESTS-AYRSHIRES-Continued.

		Buttermilk, when churn- ing finished	Degrees 55 55 55 54 54 54 55 54 55 55 55 55 55
TURE	Temperature	Cream and Churn	Degrees 52 52 52 52 52 52 52 52 52
ND TEMPERA	2	Dairy	Degrees 5.8 8.8 8.8 8.0 5.8 8.0 5.8 8.0 5.8 8.0 5.8 8.0 5.8 8.0 5.8 8.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5
CHURNING-TIME AND TEMPERATURE		Duration of Churning	Minutes 36 25 25 25 25 25 25 25 25 25 25 25 25 25
CHUR	Time	Churning fluished	3 45 p.m. 3 50 p.m. 3 45 3 46 4 23 4 20 4 40
· ALLEGO COLLEGE COLLE		Churning began	30 mm. 30
	Name of Animal		Hobsland Lucy 2nd  Byreholm Viper 2nd Byreholm Diamond Byreholm Dazzler Dunlop Sunlight Kilfillan Fillet Douglas Hall Dandy Daisy 2nd Douglas Hall Janet Ann 2nd Lessnessock Daisy Chain 4th
	No. in	logue	286 288 288 291 295 296 296

## BUTTER TESTS-GUERNSEYS.

,	,		<u>ئ</u>				,		o o	
sp.	1		Prize	H.C					'riz(	
Awards	1	H.C.	1st 1	R.& H.C.	H.C.	H.C.		H.C.	3rd Prize	
							10			10
Total Number of	3.20 13.70	ক ক	9	<del>-</del>	8.1032.85	6.0030.00	1.0022.75	30.50	92.9	5.7
Lactation	201		_ <u>2</u> _	703	103	00	00		8	-8
No. of Points for Lactation		(food V. Good 22.25 12.00 34.25	V, Good 38.25 12.00 50.25	17.8 V. Good V. Good 23.75 10.70 34.45				1	20.8 V. Good V. Good 24.75 12.00 36.75	Good 24.75 1.0025.75
Mo. of Points for Butter	Good 10.50	2.25	3.25	3-75	24.75	00·f7	21 - 75	Good V. Good 30.50	.75	1.75
	; <del>=</del>	- 55	<u>88</u>	-23				36	- 24 - 24	<u> </u>
Colour and Butter of Quality of Guality of Guality	1001	. Got	God	305	Fair	Pair	Soft	(100	600	5005
Colour and Butter of Quality of Butter	·	- 4-	_ <del>&gt;</del>	- <del>,</del>				Ξ. Σ	<del>مة</del>	_p
Colour Se	44.7 V. Good	300	Exc.	000	Good	Good	Good	3005	Go.	18.5 V. Good
	<u>V</u>			20.					8	Δ <u></u>
Ratio, viz , lbs. Milk to lbs. Butter		15.7	13.7	17.	20.3	20.4	22.1	19.8	20.	18.
Butter Yield	103	19	64	73	85	œ	5.4	143	80 Ept.	20 12/4
<u></u>		=	11.2	<del>-</del>	21	10	01	131	2 1	
Milk Yield	6									
Zield	8 29	11 22	11 32	11 26	-8 33	2,30	8,30	11 37	2.35	- 82
Milk Yield Bven.	13 13	6 13	0.13	11	2 13	813	8 12	2.16	0 14	3.13
Milk Yie Morn, Even.	13			11		∞ ¯		c1		
	15	- 30	113	7.14	- 18	17	50 17	26 21		50 15
o.of Days in Milk	8 72 15	1924. Dec. 28 295	1925. April 11 191 19	25 147 14	20'121 18	11 100 17		23 2	2 170 18	
e of		4 	1925. pril 1	çi	ie 2		5. 30			8.30
Date of Last Calf	1925. Aug.	13 Dec	19 Apr	May	June	July	Aug.	Sept.	Мау	Aug.
			61							
1 1	191	19	19]	19]	5, 1918	195	19	7, 1918	19,	30, 1922
Date of Birth	19,	11,	26,	. 18,		12,	Ξ,	1 7,	10,	
l Bu	Mar. 19, 1917	Jan. 11, 1916	Sept. 26, 1919	Sept. 18, 1917	June	July 12, 1920	Nov. 11, 1919	April	Dec. 10, 1920	May
						938		7 9		878
Live Weight	lbs. 1077	1192	1065	1084	1016	-	1013	Caringorin Dahlia Polly 2nd 1116	Southern Starette 1127	
7	ay	iet 2nd	:	<b>a</b> .	Cottage Cheminante of	Carteret	Goodnestone on	Sorn	ette	h Lamorran
Name of Animal	Tregothnan May	Broom Floweret	ze	Flossie of Bella	5 5 C	Ĕ.	Ines	Cairingorii Polly 2nd	Star	amo
of A	hma	Ĕ	Tregye Maze	of	nam		100c 1100c	Po	rn (	rth L
ame	got	woo	жув	ssie	emi	Loulou of	Go Bighton	hlia	uthe	Tunworth L
Z	Tre	Br					Big		Sol	Tu
		uth	M.P.	A. Chester Beatty	A. Chester Beatty	:	حد	:	, f	M.F.
Ä		Falmouth es es Bt.	P of	Bea	Вев	no.	rbet	W. F. Trumper		
Exhibitor	49	Fa nes	Bolitho	ter	ster	W. Dunkels	Ç	Cruz	ir James Remnant,	n. ( nce, .C.,
Exh	Viscount	Fa Sir James Remnant.	% B	hes	Thes	Dur	D.	F. 3	Jan	ol. Hon. ( Lawrence, K.C.,
-	Visc	Fa Sir James Remnant.	T. R.	A. (	A. (	×	Mrs. D. Corbett	×	Sir James Remnan	Col. Hon. G. Lawrence, K.C., I
angarnana we take	- <u>&amp;</u>	66	8	02	80	60	12	14	16	17

BUTTER TESTS-GUERNSEYS-Continued.

	Awards			H.C.	2nd Priz	H.C.				What was a second and a second	 National Con-	
Xo. of san	Total Total		18.00	8.7027.20	9.1043.85	0033.75	0.80 19.55	4.80 24.05	2.40 25.15	00.26.75	 	
oints for	o. of P	X	ļ			**				_		
Points utter	No. of for B		00.81	Good 18.50	34 - 75	Good 30 - 75	Good 18.75	19.25	22.75	25.75	 	
our and talty of Butter	ıslity	იტ	V, Good	V Good	Exe.		boot) y	Fair	Farr	Good V Good 25 · 75		
Colour and Quality of Butter	nolour	ວ	19.4 V. Good V. Good 18.00	20.7 V. Good V	Exe.	Cloud V	(tood V	Good	Good	Ctood.	-	
	~ ~ ~ ~ ~ ~			<u>~</u>		21 · 6 V				7	 	
iz., lbs.	v toits.		13		15.8		33	29.8	21.8	61		
blsi T	Butter	5ZO 5	я	$\frac{2}{2}$	6.0 13-4	143	6.4	<u></u>	63	93		
† † * *	<u></u>	ozs	12	151	<del>- 61</del>	141	5	131	0-1	<del></del>	 	
ple	F	s lbs	14 21	223	1434	0 42	033	1035	331	1434	 	
Milk Yield	ven.	S OZ							_			
MIL	Morn. Even. Total	ozs lbs ozs lbs ozs lbs	14 7	13 11	6 15	14 19	516	3 15	3 13	0 15		
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rs in Milk	of Day	oN		127	131 18		48				 	
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of Of	Birth		7, 13	4, 1921	15, 19	10, 1921	22, 1921	14, 1923	13, 1923	12, 1923		
ţ	Ē		Nov. 24, 1920	Oct.	Feb. 1	Dec. 1	July 2	Feb. 1	Jan. 1	Feb. 1		
,				0 906		872 D	786 Ju	888 F		770 F	 	
eight	W svil		,		1034			88	791		 	
	Name of Animal		by	ne ,	Rosre ady	Kichmond Hockley Ivy 2nd	lare	Calehill Peaceful	=	Rubella 2nd of Sarma		
1	of A	1	Dahlıa Ruby	Rangebourne	K Worland Lady	y I	S.	l Pe	l Sall	e 9n	4	
	me		ılıa	ngel	clan	ckle	ene	ehil	Calehill	bella		
1	ž	Ē					Cy.					
	Exhibitor	manus on the second desirability on the second	W. F. Trumper	. F Trumper	J. B. Body	Mrs. D. Corbett	A. Chester Beatty Cyrene's Clare	. Chester Beatty	. Chester Beatty	. F. Trumper		
A. O			318 W	319 W.	321 J.	322 M	325 A.	329 A.	330 A.	336 W.	 	
5uBolati	ւ) ան (	N.	3	33	32	32	33	32	ಜ್ಞ	65		

BUTTER TESTS—GUERNSEYS—Continued.

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ц,	Manney A 20 come W		1	Time			Temperature	
logue	глаше от жишал		Churning began	Churning finished	Duration of Churning	Dairy	Cleam and Charn	Buttermilk, when churn- ing finished
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The Dairy Show Butter Tests of 1925.

atalogue	Exhibitor	Name of Animal	Veight	, å,	Date of		Date of		Alik ni sys	Mil	Milk Yield	ਦ	blei Y 19			Colour and Quality of Butter	and ty ter	Points Sutter	Counts for action.	to redmin	Awards
) ai .0			Live	4			ISSU CA			orn.	Morn, Even.	Total				nolour	tilisi	o .o. i 101	I to oï toed	N Lato	
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337	Hon. A.	Windlesham	Jbs. 996	Feb.	6, ]	6, 1920	1925. Sept. 18		31 27	2 25		052	- <del>2</del> -	03	25.5 (4	Good	(lood 32·75	32.75	ş 1	32.75	
338	Hen F. B. Imber	Windflower Blue Hayes Cat	880	Mar.	13, 1	1919	June	61	6 135 12	11 10		623	-=	63 10	.2 V.	Good	16.2 V. Good V. Good	22.75		9.5032.25	
339	F. B. Imber	Blue Hay	330	Dec.	16, 1	1917	Feb.	132	13 248 16	5 15		331 8	67	3 <u>1</u> 14	.2 V.	Good	Good	35.50	12.00	14.2 V. Good V. Good 35.50 12.00 17.50	2nd Prize
341	Lerry E. A. Strauss	Derry's Fairy	266	May	16, 1916	916	Sept.	11	3822	3 18		070	31 18	133 21	21.8 F	Fair V	poot)	Good 29.75	i	29.75	**************************************
342	Mrs. V. Ames	Frostie 4th	922	Aug.	26,	1918	April		5 197 22	218		540	7 1 1	154 20	20.7 F	Fair v	. Good	31.25	12.00	V. Good 31.25 12.0043.25	H ('.
343	R. Bruce Ward	Miranda's Lass	838	Nov.	5, 1	1919	Mar.	102	10 223 20	14 15		989	4 1 1.	]4 <u>]</u> ]	.2 V.	-tood	Good.	30.50	12.00	19.2 V. Good V. Good 30.50 12.00 42.50	H.C.
344	R. Bruce Ward	Pirouette	896	April	က်	1920	May	19	19 153 24	0 17		341	63	73 10	9:	ood v	Good.	39.50	11.30	16.6 Good V. Good 39.50 11.30 50.80	1st Prize
340	Mrs. Hayes Sadler	Eastfield Lady	1016	Oct.	5, 1	1919	Jan,	4	4 288 10	10	01 6	1020	40 14	141 25	22.3 F	Fair	V. Fair	14.50	15.00	V. Fair 14 · 50 12 · 00 26 · 50	
350	J. J. Hoyle	Lady Vedas 6th	974	Aug.	11, 1918		Aug.	53	51 23	2 18		541	2	41 18	18.1 V. Good		Good	36.50		1.10 37.60	н.с.
351	G. Berry	Dewberry	912	April		7, 1920	July	10	10 101 24	2 16	6 14 41		0 1	$15\frac{1}{2}$ 2(	20.8	Good	Fair	31.50		6.1037.60	H.C.
353	C. W. Hough	Dumlea's	926	Dec.	14, 1919		Aug.	œ	72 22	620		1143	7	62  17	9 V.	Good	17.9 V. Good V. Good 38.50	38.50		3.20 41.70	H.C.
356	J. Pierpont Morgan	Tidy Mabel	934	Sept.		2, 1921	Aug.	-57	56 24	321	1 1446	46	-22	43 20	20·1 F	Fair	Good 36.50	36.50		1.6038.10	H.C.

BUTTER TESTS—JERSEYS.

BUTTER TESTS-JERSEYS-Continued.

Fig. 20   Fig. 20   Fig. 30   Fig.	0		2.	,,,,	2001	y	~700		J (41 C)		0000	o <sub>j</sub>	101	٠.			
Rxhibitor   Name of Animal	ì	rds		1	Prize									H.C.			
Exhibitor   Name of Animal	1	Awa		1	3rd		H.C.	H.C.	H.('.	H.C.	H C.	H.C.		R.&			
Exhibitor   Name of Animal	to Jagi	sju un	N 1810.	- ;	6.75		09.	3.75	.75	90:	·10	0.75	1.50	6.75	99.2	3.50	07-5
Exhibitor   Name of Animal	1				<del></del>		00		00	- <del>1</del> -00	-09	<del>1</del> 00	5027	90	60		90-
Exhibitor   Name of Animal				N.	512.		0 12.		5 5	0 12.		512.		512.			
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Rzhibitor   Name of Animal   Fraction   Date of Animal   Fraction   Date of Animal   Fraction   Date of Animal   Fraction   Date of Animal   tes   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates of Animal Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Dates   Da	r and hty		uality	ъ	Fair		Good	Fair		V. Good	Fair	V. Good	Good	Good	Good	Good	1
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Rxhibitor   Name of Animal     E   Date of	blatZ	10	Butt	S OZ4	65-	<del>]+</del>	153	0.3	113			$12\frac{3}{4}$	6	$0^{\frac{3}{4}}$	0	<del>1</del> 9	H21
Rxhibitor   Name of Animal     E   Date of			tal	ozs	- 2		101	8	<del>2</del>	132	141	211	61	102	61	0]	12
Rxhibitor   Name of Animal     E   Date of	leld		T.	sqlsz	27			870	33		132	035	87	529	321	4 18	
Rxhibitor   Name of Animal     E   Date of	ılk Y		Eve	lbs o			14 1		14 1							œ	
Rxhibitor   Name of Animal   E   Date of   Date of   E   E   Date of   E   E   E   Date of   E   E   E   E   E   E   E   E   E	×		lorn.	N OZB													
Rxhibitor   Name of Animal   Fraction   Date of Britch   Batt Calf     G. Cruss   Roberta's Star   Bar Calf   Batt Calf     H. C. Pelly   Remember Flo   Symbol   R2   June   Symbol     R. Bruce Ward   Daisence Pride   R54   June   Symbol   July 10     H. C. Pelly   Symbol   R29   June   Symbol   July 10     Rrs. B. Watts   Basence Pride   R54   Jan.   R   1922   July 15     R. W. Carson   Crystal Cid's   Freda   Shay   Symbol   July 15     G. W. Hough   Origa's Velva   706   May 18, 1922   July 15     R. Bruce Ward   Pavlova   907   Aug.   5, 1922   July   5     R. Bruce Ward   Pavlova   907   Aug.   5, 1922   July   5     R. W. Carson   Benedicite   776   May 20, 1923   July   5     R. W. Carson   Benedicite   776   May 19, 1923   June 22     G. Berry   Last of the   776   June   5, 1923   June 22     G. Berry   Last of the   776   June   5, 1923   June 22     G. Berry   Last of the   776   June   6, 1923   June 22     G. Berry   Last of the   776   June   6, 1923   June 22     R. Berry   Last of the   776   June   6, 1923   June 22     R. Berry   Last of the   776   June   6, 1923   June 22     R. Berry   Last of the   776   June   6, 1923   June 22     R. Berry   1925   June 22   June 22   June 22   June 22     R. Berry   1925   June 22   Jun	in Milk	87.					1061	26 1	162/18	167	96 18	2732	65_1	[73]	190		1911
Exhibitor         Name of Animal         ## Per Pairth         Date of Birth           G. Cross          Roberta's Star         11ss.         Oct. 5, 1920           H. C. Pelly          Romenber Flo 3rd         822         June 3, 1921           H. C. Pelly          Symbol          829         Nov. 20, 1921           Mrs. E. Watts          Bseence Pride          854         Jan. 8, 1922           R. W. Carson          Crystal Cid's         840         April 4, 1921           G. Berry          Postmistress          907         Aug. 5, 1922           W. Hough          Postmistress          907         Aug. 5, 1922           W. Hough          Postmistress          907         Aug. 5, 1922           W. H. Prescott         Frostie May          776         May 18, 1923           R. W. Carson         Benedicite          776         May 20, 1923           R. W. Carson         Benedicite          776         May 20, 1923           G. Berry          7776         May 20, 1923		ţ;	Jan.		. 5. 1.0		112	. 23	10					1 29	5		25
Bxhibitor   Name of Animal   E   Birth		Date	1881		192 Apri	-	Apri	Sept	May	May	July	Jan.	Aug	Apri	July	Sept	June
Bxhibitor   Name of Animal   E   Birth					086		1920	1921	1921	1922	1921	1922	1923	1922	1923	1923	923
Rxhibitor   Name of Animal		ate of	Sirth		16	ì		જ	20,	œ,		23,	18,		20,		
Bxhibitor  G. Cruss Roberta's Star and H. C. Pelly Symbol R. Bruce Ward Philandra Mrs. E. Watts Essence Pride R. W. Carson Crystal Cid's Freda G. Berry Postmistress C. W. Hough Prostie May W. H. Prescott Frostie May W. H. Prescott Benedicite G. Berry Benedicite G. Berry Benedicite G. Berry Benedicite G. Berry Benedicite G. Berry Benedicite G. Berry Benedicite G. Berry Last of the Danes 2nd		Ä,	-		Oct				Nov.				May	Aug.		Mar.	
Bxhibitor  G. Cruss Roberta's Star 2  H. C. Pelly Remember Flo 3  H. C. Pelly Symbol R. Bruce Ward Philandra Mrs. E. Watts Essence Pride R. W. Carson Crystal Gd's Fre G. Berry Postmistress C. W. Hough Pavlova W. H. Prescott Frostic May R. W. Carson Benedicite G. Berry Benedicite G. Berry Last of the Danes 2	ght	iθV	Live 7		lbs.		805	822	829	854	840	936	706	907	735	776	779
G. Cross Roberta's Sf H. C. Pelly Symbol R. Bruce Ward Philandra Mrs. E. Watts Essence Pric R. W. Carson Postmistress C. W. Hough Pavlova W. H. Prescott Frostic May R. W. Carson Benedicite G. Berry Benedicite G. Berry Last of the Dana		-			_	Pug	0	n :	:		r-	reda 		:	:	:	2nd
G. Cruss Roberta H. C. Pelly Symbol R. Bruce Ward Philand Mrs. E. Watts Essence R. W. Carson Crystal G. Berry Postmis C. W. Hough Origa's R. Bruce Ward Pavlova W. H. Prescott Frostie R. W. Carson Benedic G. Berry Last of		Anim			3		F E	:	دم	ride	id's	.e83	elva	:	ay	ىە	ne anes
G. Cross F. H. C. Pelly F. R. Bruce Ward F. Mrs. E. Watts C. G. W. Hough C. W. Hough C. W. Hough C. W. Hough C. W. Hough C. W. Hough C. W. Hough C. W. Hough C. W. Hough F. W. Carson F. W. H. Prescott F. W. Carson F. G. Berry F. G. B. Berry F. G. Berry F. G. Berry F. G. Berry F. G. Berry F. G. Berry I. F. C. W. Carson F. F. W. Carson F. G. Berry I. E. G. Berry I. E. G. Berry I. I. G. Berry I. I. G. Berry I. I. G. Berry I. I. G. Berry I. I. G. Berry I. I. G. Berry I. I. I. G. Berry I. I. G. Berry I. I. G. Berry I. I. G. Berry I. I. I. I. I. I. I. I. I. I. I. I.		jo e	5		orta,		embe	pol	ındra	nce J	fal C	mistr	a's V		tie M	dicit	of til D
G. Cross H. C. Pelly H. C. Pelly H. C. Pelly R. Bruce Ward Mrs. E. Watts R. W. Carson G. Berry C. W. Hough R. Bruce Ward W. H. Prescott R. W. Carson G. Berry G. W. Garson		Ž			Robe		Rem	Sym	Phile	Esse	Crys	Post	Orig	Pavl	Fros	Bene	Last
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छ मं मं सं में छ उ सं हें सं छ		a hihi			0.88	2	Pell	Pell	ruce		Ga	arry	Hol.	ruce	[, Pre	Can	erry
		24	•		<u>ئ</u>	5	H. C.	H. C.	R. B						W. H	R. W	G. B.
	Jogue 1	ets	O. ni .o	N													

BUTTER TESTS—JERSEYS—Continued.

No. in Cata-				wow.	NING-TIME A	CHURNING-TIME AND TEMPERATURE	ATURE	1
,	Name of Animal			Time			Temperature	
logue	Navarania (Mandala Jana		Churning began	Churning	Duration of Churning	Dairy	Cream and Churn	Buttermilk, when churning finished
The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa	Addition to a complete the management of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the compan				Minutes	Degrees	Degrees	Degrees
337	Windlesham Windflower	:	5 20 p.m.	5 35 p.m	15	558	55	26
338	Blue Haves Cat	:	5 40 ,,	6 15 "	35	20	52	19
339	Blue Haves Sporran	:	5 20	5 45 "	25	58	52	10
341	Derry's Fairy	:	5	5 35 ,,	23	58	52	걸
342	Frostie 4th	:	70	6 7 "	55	58	52	3
343	Miranda's Lass	:	5	" OF 9	50	59	52	25
344	Pirouette	:	5 25 ,,	6 20	55	58	52	54
349	Eastfield Lady	:		5 50 ,,	27	58	52	55
350	Lady Vedas őth	:	5 46 "	6 45 ,,	59	59	52	25
351	Dewberry	:	5 30 "	5 50 ".	20	59	55	53
353	Dumlea's Fontaine	:		5 55 ".	25	20	55	Z :
356	Tidy Mabel	:		6 20 ".	22	9	52	23
357	Roberta's Star 2nd	:	5 25 .,	5 40 ,,	15	58	25	<u>.</u>
358	Remember Flo 3rd	:	10	e 40 "	#	69	25	10
359	Symbol	:	5 40 "		25	20	25	<u> </u>
362	Philandra	:	" 0 9	6 23	83	99	55	F 1
366	Essence Pride	:	" 0 9	6 38	æ	9	52	95
367	Crystal Cid's Freda	:	6 37 "	6 58 "	21	9	25	ig.
371	Postmistress	:		6 45 ,,	45	99	52	70
378	Origa's Velva	:	6 25	6 45 ".	20	90	55	19
381	Pavlova	:	6 55	7 50 .:	55	99	55	99
385	Frostie May	:	6 13	6 50	37	8	22	27
389	Benedicite	:	6 45	7 15	30	99	52	55
391	Last of the Danes 2nd	:	6 3	6 45	42	99	55	<u>t</u>

### BUTTER TESTS-KERRIES.

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	l Xumber of Points	Total		4.75	32.50	21.00 12.00 33.00	32.75	38.75	$22.0011 \cdot 3033 \cdot 30$	27.55				. !
	of Points noitston	.o.M I ror		Į	1	12.00	I	1	11.30	08.0				
	of Points Butter	.oV ioi		44.75	32.50	21.00	32.75	38 · 75	22.00	26.75 0.80 27.55		-		
	and lity tter	gallen Q		Good 44.75	Fair	Soft	V.Good 32.75	Soft	Firm	Fair				-
	Colour and Quality of Butter	Colour	-	Pale	32.6 V.Pale	Fair	Faur	Pale	Pale	Pale		 		-
	riz., Ibs.	Ratio Milk to		20.1	32.6	29.0	23.2	15.5	24.5	28.2		 		-
	bfei Y reti	But OZB		$12\frac{3}{4}$	03	10	$0\frac{3}{4}$	63	9	$10\frac{3}{4}$				-
		en Total p	1	62	22	=	72	52	111	4		 		_
	Milk Yield	en T		999	266	638	545	337	033	647		 		-
	Milk	Morn. Even Total		027	030	11 17	221	2 19	11 15	1 48 25 14 21		 		
				39 29	40 36	50	1524	16 18	18	25		 ***********		
	Alilk ni ays				9 40	6 166 20	4 15	3 10	19 153 18			 		
	Date of		1095	Sept. 10	Sept. 9	May (	Oct. 4	Oct.	May 19	Sept. 1				
	Jo.			May 28, 1921	May 12, 1917	Mar. 14, 1916	Sept. 21, 1920	950 April 11, 1918	G	Jan. —, 1915		 	-	
	Date of Birth			28	12,	14,	£. 21,	111,	1919	ſ.				
				May		Mar	Sept	Apr						
	Weight	9VÅI	1		2nd 1056	955	965		912	847		 		
	Name of Animal			Buckland Peace	2nd Coquet Gipsy	Valencia Eileen	Ltd. Wadlands Fanny	Vaddy	Mournemore 9 Hattingley	High Kick Buckhurst Elfin				
	Bxbibitor			394 Lady Fitzgerald	396 BrigGen. Ll.	Palmer Kerry Estates,	J. W. Towler	J. W. Towler	Capt. N. Zambra	& C. Williamsor Miln Capt. N. Zambra	& C. Williamson- Milne			
	atalogue	No. in C	l	39-	30(	397	398	399	405	406				

BUTTER TESTS-KERRIES-Continued.

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Buttermilk, when churn- ing finished	Degrees 5.4 4 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5
URE	Temperature	Gream and Churn	Degrees 52 22 22 22 22 22 22 22 22 22 22 22 22
D TEMPERAT		Dairy	Degrees 60 60 60 60 60 60 60
CHURNING-TIME AND TEMPERATURE		Duration of Churning	Minutes 30 20 20 25 25 15 18
CHURNI	Time	Churning finished	6 45 p.m. 7 110 7 123 6 55 6 40 6 40
CHURNI	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Churning began	6 15 p.m. 6 50 " 6 37 " 6 58 " 6 40 " 7 40 " 6 22 "
	Name of Animal		Buckland Peace 2nd Coquet Gipsy Valencia Bilecn 3rd Wadlands Fanny Vaddy Mournemore Hattingley High Kick Bucklurst Elfin
	No. in	logue	394 396 397 399 405 406

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KX nibitor		Name of Author	W eviJ	j <b>m</b>	Birth	Las	Last Calf	vo.of Day	Morn. Even. Total	Ever Ibs on	en. Tol	tal F	211Dat 0	Ratio, 7 Milk to lb	Colour	Quality	Yo. of W 101	No. of Pacts	IN IstoT	an must
SOUTH DEV W. Hunt	DEVON.	Milkmaid 9th	lbs.	Sept.	2, 1916		1925. April 13	68	189 16 11	11 12 1	10.29	51	133	15.8	15.8 V. Good	Fair		12.00	29·75 12·00·41·75	R.&H.C.
G. Wills	:	Snowdrop 2nd	1632	June	22, 1919		Sept. 16	6 33 30		11 32	3(62	143	23	19.8	V. G000	V. G00	19.8 V. (tond V. Good 50.75	1	50.75	£3 Prize
DAIRY SOUR, Hall	SOUTH	DEVON. Ferry Lady 2nd	1492	June	20, 1919		me I'	June 17124 24		5 18	3.42	∞ €1	42	18.9	Farr	Firm	36.50		8-40 44-90	£3 Prize
DEVON. N. D. Lupton	•	Comptor	1415	Sept.	22, 1920		Sept. 17	7 32 17		615 1	1333	<del>1</del>	20	و 19	Good	Firm	24.25		24.25	
W. D. Chick	:	Happine Lovely 4th	1348	May	5, 1918		Sept. 11	38	25	821	0 46	142	0	23.5	Good	Fair	32.00	i	35.00	H.C.
W. D. Chick	:	Compton Holly	1235	Sept.	16, 1921		Sept. 27	22	23	10 19	8 43	67	24	20.0	Pale	Fair	34.25		34.25	R.&H.C.
R. A. Clarke	<b>&amp;</b>	Gentle	1258	Mar.	4, 1920	20 Oct.		6 13	27	521 1	11 49	0	0	24.5	Good	Good	1 32.00		32.00	H.C.
R. A. Clarke	Sons	Lady 9th	1066	Sept.	Sept. 26, 1921		Sept. 17	7 32 21		318	539	8	10	29.4	Good	Firm	21.50		21.50	
A. T. Loram	SOIDS	Janet	1408	_	1918	 Š	Sept. 14	4 35 28		14 25 ]	11 54	92	co 1101	24.7	24.7 V. Good	Good	1 35 50		35.50	£2 Prize
A. T. Loram	:	Мау	1354	7	1919	 	Sept.	9 40 30		826	256	102	rQ Les	24.2	Fair	Good	1 37 . 50		37.50	£3 Prize
J. H. Chick	:	Wynford Dahlia	1426		Jan., 19, 1921		April 8	819415		0 14	2 29	2	T.	26.9	Fair	Good	1 17.25	12.00	$17 \cdot 25 \cdot 12 \cdot 00 \cdot 29 \cdot 25$	н.с.
	-		-	1	N CAMPAGE STATE			-		-	- }	-	- 1		-:	_	_	_	-	

BUTTER TESTS-OTHER BREEDS-Continued.

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 	enyway.	n	£3 Prize		R.&H.C.		£2 Prize		£3 Prize	£2 Prize	C3 Prize		1
to .oV stn	IstoT ioT	1	37.75	1.3025.30	34.35	32.25	96.00	27.00	0.5036.25	18.25 10.90 29.15	20-25 12-00 32-25	26.95	_
roints for	No. of Po Lacta		l		i	1	1	i i		10:90	12.00	1	
Points itter	No. of of Tol		37 - 75	24·00	34.95	32.25	36.00	Good 27.00	35 - 75	18.25	20.25	Good 26.25	_
and by of ter	Quality	i	Good	Farr	Good	Soft	V. Good 36.00	Good	Faur	poot	Good	Good	f
Colour and Quality of Butter	Colour		Pale	Pale	(tood	Pale	Exe.	Farr	Good	Pale	Pale	Fair	_ '
iz., Ibs. s. Butter	Ratio, v		23.9	35.0	32.5	8.87	26.5	5.96	16.5	23.1	23.8	29 3	[
Yield .	E Butter		5 1	<b>∞</b>	2.	=	평	7	8.0 81+	01 Lug	7	191	!
	Total		-619	-0	102	15.2	13.2	5	1.12	<u>i</u>	- 2	- <del>c</del> i	- '
Jeld	n. Tc	<u> </u>	14.56	13 48	10 69	10,57	10 59	345	8 36	0.26	1330	10-48	!
Milk Yield	Morn, Even, Total bs ozsibs ozsibs ozs		8 25	320	0 28	5 26	327	13/21	618	5 12	5113	8 25	;
i T	Morn Ibs oz		3530	27	3841	1731	35 32	3923 1	45 14	7	16	3925	
s in Milk	Yo.of Day			53						23 149 14	5 167 16		
9	Calf	25.	Sept. 14	. 27	Ξ	©1	Sept. 14	t. 10	45			t. 10	- 1
- Appl	Last Calf	1925.	Sep	Aug.	Sept.	Oct.	Sep	Sept.	Sept.	May	May	Nept.	
-					_	_		Oct. 13, 1920	17, 1921	June 23, 1921		1919	
	Birth		ļ	1	1919	1919	1920	13,		23,	1913	15.	
1	•								Oct.	June		800 Mar. 15, 1919	
digie	W 9vil	lbs	1328	1515	1519	1367	1358	1259	1065	£49	794		
	Name of Aninal		Bramshall Joan 1328	Bradbourne	Marige Pike Verocity	Brad	(Addy Girl Pike Venice	Mwynig Hunod	Hall Green Gift	Barrow Bee 6th	Bridesmand	Just Found of Hookstile	
eaugle	No. in Ca	BLUE ALBION.	238 LtCol. W. E.	239 LtCol. W. E.	Harrison 1. D. Seals	242 J. D. Seals	243 J. D. Seals	WELSH BLACK. 248 J. B. Jones	251 C. W. Crompton	DEXTER. 418 Col. W. O. Gibbs	120 H. F. Earl	421 T. A. Stephens	
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BUTTER TESTS-OTHER BREEDS-Continued.

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### NEW INVENTIONS, DAIRY SHOW, 1925.

By J. GILLARD STAPLETON.

The number of entries in the Inventions Class this year was considerably in excess of the usual, being 51 in number, and in consequence, the Judges for these had a very busy time.

Many of the entries could scarcely be classed as new inventions, and others were not of sufficient ment to justify any particular examination, and a preliminary elimination was made in consequence, and those entries which appeared to provide for the equipment of the Industry under what might be described as conditions which are rapidly passing and giving place to more enlightened methods, were cut out of the list.

The Judges wish to report that among the entries were inventions which had no relation to each other, and between which no comparison could be made, and which, therefore, provided no common ground upon which to base a scale of points for the Judges to work to.

It is true that this class includes "any invention," and that some such class will probably always be necessary, but it appears to the Judges that the number of entries contained therein might be reduced if consideration were given to the creation of some new classes, and if such new classes were introduced at future shows, the Judges would feel more confident in dealing with a position which as now existing is somewhat complicated.

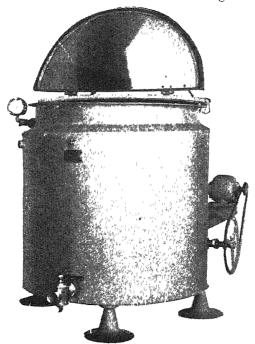
The Judges further felt that no just opinion could be given upon the merits of some of the entries without proper trial over a sufficient length of time. It is not possible to undertake such trials at the Show, but if the entries were known sufficiently early, arrangements might be made by which a more considered opinion concerning their merits could be obtained.

If the Council of the British Dairy Farmers' Association decides to take action in these matters, the Judges will be only too happy to give every assistance, but it would necessitate the examination of the particular entries under practical working conditions.

Many of the entries were exhibited by reason of some improvement in detail that might justify an award, in fact, quite a large percentage were of this class.

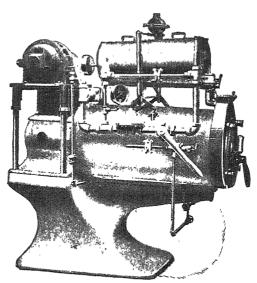
Fewer awards have been given this year, in spite of the increased number of entries, and the reason for this is probably due to the fact that many exhibitors do not realise to the full what is necessary to meet the requirements of the Industry in the immediate future, and do not appear to fully comprehend what very rapid progress is being made by the Industry.

Taking the awards in detail, we first come to the Glass-lined Pasteuriser. This exhibit is essentially an apparatus designed to meet the latest requirements of the Industry in many directions. It is sanitary in construction, easily cleaned, and can be used for storage, pasteurising, retarding, and cooling milk, and will carry out the latest requirements of the Ministry of Health. The one weak point of this exhibit was the gland through which the agitating fan had to pass from the drive to the interior of the Glass-lined Pasteuriser, and which was obviously a point where the elimination of contamination would prove in practice to be almost impossible. This could be avoided if the agitating fan was passed through a gland at the top of the pasteuriser, as then milk would never come in contact with the gland.



GLASS-LINED PASTEURISER.

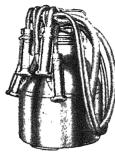
The "Goliath" Heavy Duty Ice Cream Freezer is very massive in construction, the freezing chamber being constructed to avoid metallic contamination, there being no soldered joints. The automatic control of the quantity of mix discharged into the freezing chamber is a very good point, so also is the provision made for inspection during operations. The correct circulation of the mix in the freezing chamber is also efficiently provided for.



"GOLIATH" HEAVY DUTY ICE CREAM FREEZER.

The "Louden King" Tubular Steel Stanchion for cows is excellent in construction and design, and allows additional freedom of movement for the animals, which is a good feature.

The "Louden King" Individual Automatic Drinking Fountain is a fitting of thoroughly good design to provide cows, when housed, with an ever-ready supply of uncontaminated water, and equipment of this kind will undoubtedly increase milk production, as the cows always have access to fresh clean water which adds greatly to their comfort and obviates the dangerous possibility of cows drinking very large quantities of ice-cold water during the winter months, which will often happen when long intervals elapse during which no water is available.



"ALFA LAVAL" MILKING MACHINE.

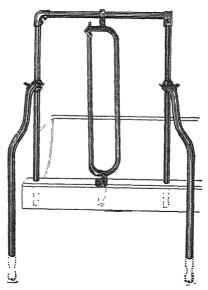
The "Alfa Laval" Milking Machine is especially noticeable by reason of its direct action on the mammary glands, and it secures a full flow of milk without discomfort to the animal; also the teat cups do not drop off when the pressure is released, features not common in most other machines of this sort.

The "Clayton" Milk Bottle Filling Machine is different from other machines of the same type by reason of the elimination of the tendency for the milk to leak into the bottles after they have been correctly filled when the

spindles begin to wear, and this is secured by a flange attached to the spindle of each filling cup which, when the cup has discharged its contents into the bottle, comes flush down on to the base of the milk container and prevents excess quantities of milk leaking through between the cup spindle and the stem through which it works.

Beatty Bros. Sanitary Steel Cow Stall is quite well designed and strong in construction, and it was difficult to decide between this and the "Louden King" fitting of a similar type.

In conclusion, it would be advisable to give the Judges a schedule of all entries in this class, and to afford them an opportunity of making a full investigation of any of them before the opening of the Show, it being left to their discretion as to which entries they would desire to so examine.



"B. T." SANITARY STEEL COW STALL

### POULTRY SECTION—DAIRY SHOW, 1925.

By R. Fletcher Hearnshaw, F.Z.S.

This section was once again a most successful one, and the quality was, without doubt, taken all round, very high. The entries in the Live Poultry were about 200 less than the previous year, but the Table Poultry was probably the largest and best section ever seen at this Show.

Mr. W. S. Brocklehurst is to be congratulated on the very able way he presides over the Poultry and Pigeon Committee, and he is well supported by a very strong committee of breeders who have the best interests of this great and model Show at heart, the one desire each year being to maintain and keep the Dairy Show the best managed Show of the year. This management is thoroughly appreciated by the way the exhibitors rally round with entries and attend in such large numbers, for there is no Show in the year where one finds so many exhibitors attending as we do at the Dairy Show, and one face they are all glad to see when they come, and that is Mr. Richard Kirk, who has acted as Steward for so many years, and let me say here how much his work is appreciated.

On the first day of the Show 23 Stewards waited on the Judges, and all the award cards were quickly placed on the pens very soon after the slips had been collected from the Judges, all being ready for the

opening time at one o'clock.

Messrs. Spratts Patent, Limited, did the penning and feeding in a most able manner, and many of the birds looked better at the end of the Show than they did when they arrived, which is a great tribute to the well-known firm. According to rule, the Scotch and Irish were dispatched early at the close of the Show, the last being booked out at 6.35 p.m. on the Friday, so that they could get home in good time.

Mr. B. Ravenscroft and his good assistant, Mr. F. J. Bull, carried out the secretarial work in a most efficient manner, both being past

masters at the game.

The Championship for the Best Bird in the Show went to a lovely dark Dorking cockerel shown by Mr. Charles Aitkenhead, and it was nice to see such a typical specimen of the good old breed coming out on the top once more.

The popular Vice-Chairman of the Poultry and Pigeon Committee, Mr. W. J. Golding, was the runner-up with his wonderful Buff Orpington cockerel, a bird that was shown on tip-top form.

The weather was mild, and the galleries got very warm with the birds and the large attendance of the public, but everyone seemed very happy, and many old friends met again and compared notes on the past breeding season, many new friends were made and many old friendships were renewed, for the social side Dairy Show week amongst poultry breeders is the event of the year. The three dinners promoted by the Poultry Club, the National Utility Poultry Society, and the Scientific Poultry Association were all well attended, and they made very pleasant social evenings and brought those attending the Show together in friendly intercourse.

The Poultry Club Room, as usual, at the top of the stairs on the gallery was well patronised, and much appreciated by the members of the Club. The S.P.B.A. and the N.U.P.S. both had very attractive stands and the large interest taken in both speaks well for their future success. Space is still limited, so that the classification has to be limited to fit the available space, therefore, those breeders who do not get classes included for their own special breeds must console themselves by knowing that only the most popular breeds can be included in the schedule.

The Judges for this event are very carefully selected, and this year they seemed to give general satisfaction.

Two classes had to be cancelled as they did not receive enough entries to stand. One was the White Orpington cockerels, and the other the Black-red Old English Game Bantam cockerels.

The Sales were held as usual on the second morning in the old spot on the gallery, and Mr. Walters was again the auctioneer, and no one can sell poultry better than him, because he knows the points of the birds. Prices on the whole were not so large as they have been often in the past, but many birds were sold, especially in the Selling classes.

The attendance of breeders at the auction was big, as many come to the Dairy Show to buy what they want for the coming breeding season. Some of the best prices were Mr. F. G. Denner's Rhode Island Red pullet, £26; Mr. W. M. Davies' Speckled Sussex cockerel, £15; Mr. T. Vincent's Light Sussex cockerel, £12 12s.; Captain Franklin's Croad Langshan cockerel, £10 10s.; Mr. J. Beesley's Modern Black-red cockerel, £10; Mr. Andrew McKinnell's Barnevelder pullet, £5; Mr. Edwards' Brown Leghorn pullet, £7 7s. 6d.; Rev. J. Hewitson's Indian Runner, £5 5s.; The Hon. Mrs. Coventry's White Turkey cockerel and pullet, £10 10s. each; Messrs. Huntley & Sons' Aylesbury drake, £7 10s.; Lord Dewar's Minorca cockerel, £5; Mr. W. M. Bell's Black Orpington cockerel, £5; and many others were claimed in the Selling classes.

The auction sales of the large entry in the Table Poultry were highly satisfactory. Mr. Thomas Sutton's First Prize pair of Sussex cockerels made £5 5s.; Messrs. E. G. Grant & Co.'s First Prize pair of Sussex pullets made £4 15s.; Colonel Humphrey Watts' First Prize

pair of cross-bred Indian Game and Orpington cockerels made £5 10s.; and the general average for all the birds in the open Table Poultry classes was £1 15s. 6d. per couple, which was splendid.

The Table Poultry and Eggs, the Judge said, were one of the best collections that he had ever seen at the Dairy or any other Show, and this speaks volumes coming from a man of such a long and varied experience.

H.R.H. The Prince of Wales, K.G., was a successful exhibitor in this section, taking third prize in a big class of 34 exhibits in tinted eggs. Both the white and the brown eggs were wonderful classes, the whites having 29 entries and the brown 27.

The Light Sussex cockerels and pullets were two wonderful classes for table purposes, containing as they did 29 cockerels and 22 pullets.

The *Petits Poussins* were not a large entry, but quite a novelty, and much interest was taken in them by the spectators.

The *Ducks* and *Goslings* made a very nice display, but were not so numerous.

It is a pleasure to state that no late entries are accepted in this section at the Dairy Show, so that the best resolution that exhibitors can make for 1926, if they wish to be exhibitors in the Poultry Section this year, is to make their entries by return post when they get their schedules, for space will again be limited, entries will be closed when the available space is full, and all late entries will be returned.

Lt.-Col. E. W. Caddick was very pleased to see such a keen interest being maintained in the Table Poultry and Egg Section at the last Show, as for many years he has acted as Chief Steward in this section in a most able manner, and the wonderful response is a tribute to his good management here.

The Table Pigeons were a small class and only contained five entries.

The Live Utility Poultry Section was once again a huge success, the seven classes provided containing 431 entries against 395 entries in five classes last year, and the three Judges had a busy time sorting them out again. Breed characteristics received good consideration, and some really fine quality birds were seen that were free from coarseness and had good laying properties. The quality throughout was of a very high order that necessitated many really good birds being left out of the money. In fact, suggestions were made that more prizes should be offered in these classes considering the large entry that is made each year, but on the other hand, from the Show's point of view, it is the big classes that help to pay for the small ones.

The White Wyandottes were a grand lot, and all penned single tier, made an attractive display with an entry of 88 in one class, and the White Leghorn pullets had an equal number, and they were a very nice lot.

Black Leghorns had 28 entries; and the Australorps, the weakest class for numbers in the Utility Section, contained 24.

The Rhode Island Red pullets we thought were a fine collection of 63 birds, and much improvement was seen in colour, type, and texture on those seen in Utility classes at recent Dairy Shows.

Light Sussex were fully justified in being allotted a separate class, for the entries totalled 86, and some splendid birds were penned. The winner in this class taking the Silver Medal for the best Utility.

The Any Other Variety Class contained 57 pullets of many useful Utility breeds, such as Brown Sussex, Barnevelders, Anconas, Red Sussex, Buff Plymouth Rocks, Columbian Wyandottes, Brown Leghorns, Minorcas, and several others.

H.R.H. The Prince of Wales, K.G., took second prize in this section with a beautiful Rhode Island Red pullet that was much admired.

Dorkings made an attractive display, and on the whole were better than those seen here of recent years, the winning dark cockerel taking the special for the best bird in the Show, and he was worthy of it. Size, type and quality were prominent in the winners, with pure legs and feet. Several pens were empty in these classes, in fact, only four dark pullets were penned out of eight entered, the first and second winners in these classes being very typical specimens.

The Silver Greys, taken as a whole, were not so good as the Darks.

Croad Langshans came up well with 64 entries against 58 last year. Some of the exhibits were outstanding, especially the first and second cockerels, and the whole lot of this breed showed wonderful improvement, both in type and colour. This breed lays a rich coloured egg, and for that reason alone is always in good demand with those who prefer a breed that lays a rich brown egg.

Brahmas again had four classes with only 19 entries in all, probably accounted for by the bad breeding season. With this breed the Light pullets were undoubtedly the best class, the winners being excellent specimens of their breed, the Dark pullets standing first and second were really good birds and not much between them, in fact, either could have won.

Cochins came up better with 20 birds in two classes, and they contained some very promising chickens, especially in Blacks and Whites. The winning Black pullet took the Medal for the Best Brahma or Cochin, and hers was a popular win for she is the best Black chicken seen out for some years. Several nice Partridges were shown, but they were rather young.

The Sussex once again came forward in large numbers, and still seem as popular as ever. The Light cockerels, with 75 entries, and the Light pullets, with 94 entries, were two wonderful classes for

quality, for the same exhibitor to win these two great classes was a wonderful thing, and he is to be congratulated on producing two such good chickens. Six money prizes were again offered in these two classes, and this was greatly appreciated by the exhibitors.

Red Sussex were a grand lot, the cockerels were a fine evencoloured lot of true Sussex type, and the pullets were far better in colour than those seen the last year or two.

Speckled Sussex were not so good in cockerels as one expects to see at this Show, but on the other hand the pullets were a grand lot, and the winner took the Medal for the Best Sussex. She was a beauty. In fact, very near perfection.

Brown Sussex were a great improvement on previous years, especially the pullets, which were more uniform in colour.

The Sussex Selling Classes were well supported, and it was a great improvement in these to separate the Lights from the rest, an innovation that was much appreciated.

Faverolles had two classes, and were the strongest in quality seen at this Show for some years, the chickens were very forward and in good condition. Both the classes this year were for Salmon Faverolles, and to find an entry of 25 in this one colour was very satisfactory.

Wyandottes as usual were one of the strongest sections, the Whites as usual heading the classes for number of entries with 45 cockerels and 60 pullets. They were well judged, and the winners here again appreciated having six money prizes in these two classes. The winners in these two classes were grand birds, beautifully shown, and a credit to the poultryman who put them down so fit. Taken throughout, the shape and colour was good and the chickens nicely forward.

Silvers came up well with seven cockerels and 20 pullets, and we had quality also in the Silver pullets. They were, indeed, a grand lot.

Golds were a nice collection, and for richness of colour they were equal to anything seen here for some years.

Blacks were a nice even lot, 19 cockerels and 26 pullets being a good entry, but although coming rapidly popular again, we did not think that they were as good in type and colour as we have seen here in the past.

Columbians again had a good entry, but there was nothing really outstanding amongst them, and the chickens as a whole were backward, many of them requiring time to make up properly.

Partridge Wyandottes made a very pretty display with 24 entries in the two classes. The winning pullet was a beauty and much admired.

Orpingtons, with eight classes provided for them, could only muster 100 entries, very different to the old days when they used to be one of the largest sections of this Show and some of the biggest classes

in the Show. As a breed they are very beautiful, but not very fashionable at the moment

Blacks were nice classes with 15 cockerels and 17 pullets. Both classes contained birds of good average merit and many future winners.

White Cockerels were cancelled, and only 10 pullets were entered. These were a nice lot for shape and colour, and fairly forward.

Buffs had 27 birds in the two classes this time, against 37 last time. The two winners were beauties, and splendidly shown, the cockerel being runner-up for the best in the Show.

Blue Orpingtons had a good entry, ten cockerels and 17 pullets, and at the moment it appears that there is more interest in this colour. The cockerels were rather varied in colour, but much improved in type. The first three pullets were good, especially the winner. In type and lacing the second was very promising, but younger.

Rhode Island Reds were a wonderful lot. 85 single-comb cockerels and 106 single-comb pullets were truly a wonderful collection, and a great testimony to the popularity of the breed to-day, many new names appearing in the catalogue, which means many new recruits. The cockerels in the single combs were not as good as the pullets, but for all that they were a wonderful lot.

Rosecombs had 18 cockerels and 23 pullets, and here again the pullets were the best class, although the winning cockerel was a gem.

Barnevelders, one of the most popular breeds in this country to-day, were included in the schedule for the second time, and the two classes contained 94 birds against 67 last year, thus showing how popular they are becoming, for both exhibition and utility, the same type and colour being suitable for both purposes, the pullets lay the wonderful brown eggs, and the cockerels make such splendid table birds.

A most useful breed for the farmer to take up as they are so hardy.

Anconas made a good show with 20 cockerels and 39 pullets, the Medal going to the winning pullet. She was very forward and quite at her best. The winning cockerel was stylish, good colour and tipping, neat head, legs, and condition.

Frizzles are always quaint and interesting, and the class provided for them contained two more entries than last year. They were well-curled birds of various colours. They are very good layers and very hardy.

Polish had one class guaranteed by the admirers of this good old breed, and six entries were made in it, Silvers being first and second, and a nice Gold third. An effort is now being made to revive this breed again. They are still very popular on the Continent, and classes fill well there.

Old English Game, with a popular Judge, filled well, the quality

of the Black-red cockerels being especially good. The heart-shaped frame, broad muscular chest, bequeathed to the Old English Game Fowl by the selection of generations of Cockers, is still in evidence. This breed makes an excellent bird to cross for table purposes, being better layers than Indians.

Minorcas had less entries than last year, although the quality was very good. The winning cockerel was a typical grand headed bird, and he took the Medal, and the pullet was a good headed nice-coloured bird, well shown.

Andalusians, with 15 cockerels and nine pullets, made two good classes. The winners were well laced, on good sound ground colour, with good head points, and although an old breed, are still fairly popular in many districts.

Leghorns are still as popular as ever, and the ten classes provided for them had a splendid entry, and we found no extremes in this breed compared with what we have seen exhibited in past years, and we congratulate Leghorn breeders on getting back again to more typical birds, more like we used to see before the requirements of the exhibition birds went to such extremes.

Browns made a splendid show. The cockerel class contained 16 birds and the pullets 10, the winning cockerel taking the Medal. And he was a beauty.

Whites filled best for numbers, with 26 cockerels and 24 pullets, and here, again, the cockerels were by far the better lot, the winner standing right away, being shown to perfection.

Blacks came up nicely, with 23 cockerels and 22 pullets. We thought they were a very representative lot, with nothing really outstanding.

Exchequers filled well, with 17 cockerels and 19 pullets. Here the Judge favoured the Utility type, and the winners were all very useful looking birds.

The two classes for Any Other Colour had an entry of 30 entries, and contained some very attractive birds in both classes nice coloured.

Buffs were first, and it is a wonder more exhibitors do not take up this variety. The remainder of the money prizes going Duckwings.

Plymouth Rocks continue to be as popular as ever, and have always been a favourite breed with both the farmer and the fancier, and again, with a popular Judge, the entry was a great one.

Barred, with 26 cockerels and 33 pullets, lead the way. The cockerels were very good in size and type, and with the winners the colours were good, both black and white and the bars nice and distinct. After the winners the colour was not so good, but size and shape was good all round. The pullets were a really good class, the

winners being very good indeed, the best seen at this Show for quite a long time. They had good type and nice even colour well barred.

Buffs showed a great improvement, with 28 in each class. The cockerels were a really good lot, with size, type, and colour of the best. The pullets, too, made a good show, though as a class they were hardly equal to the cockerels, but were very shapely and nice coloured birds.

The Any Otler Colour Rocks were 20 in two classes, and the winners were Whites, but not as good as have been seen here in past years.

Buttercups had 19 cockerels and 23 pullets. This breed does not seem to make many new friends, and most of the old exhibitors of the breed filled the two classes provided for them.

Silkies were the best lot ever seen at the Dairy Show, the 23 birds in each class being a record entry for the breed at this event. They are a most useful breed, being good layers and splendid mothers for chicken rearing, and when crossed with small Wyandottes make ideal birds to use as sitters. There is a tendency in the hens to-day to get the crests rather too heavy over the eyes, and this must be guarded against; also some cocks are inclined to have horns on the combs, which is not desirable. The winners were nice typical birds of this the smallest breed of Fowl. Please remember that Silkies are not Bantams as some would suppose. These classes always attract the general public's admiration.

Indian Game, with 34 cockerels and 35 pullets, made a wonderful show, the cockerels were the better class, and we thought well-selected, but the ground colour and the lacing in the pullets was truly wonderful, and shows to what extent the breeders art has developed, combined with good size and shape, and it all goes to show how well these chickens grow in the West of England, where for so many years many of the best specimens of this breed have been bred and reared.

Campines had four classes provided for them, and the Silvers made a most attractive display with 25 cockerels and 23 pullets. The cockerels were a nice lot, with plenty of quality, and the breed is a most useful egg-producer. Gold, although not so popular, only 18 birds in the two classes, made a good display, and for quality were some of the best seen at this Show.

Bresse came up well with 14 cockerels and 14 pullets. For quality, as usual, the Blacks were far superior to the Whites in active graceful carriage, neat heads, and furnish of feathering, and probably it would be better for both if the colours could be divided in future.

The Any Other Variety Classes are always full of interest at this event for they usually contain many quaint and rare birds.

One would imagine, after the extensive classification given, that very little would be left for these classes, but the cockerels contained 20 birds made up of the following varieties: Australorps, Langshans, Sultans, Rhode Island Whites, Buff Sussex, Houdans, Black Marias,

Red Dorkings, Jubilees, Malayas, Modern Game, Jersey Black Giants, and White Pheasant Fowls. The winner was a beautiful Modern Brown-red Game, the second a Buff Sussex, and the third a Red Dorking. In the pullets the winner was a Red Malay, second a Jubilee Indian, and third a Buff Sussex.

Breeding Pens, as usual, made a splendid display, and exhibited, as they are in trios, they are full of interest to the breeders present at the Show. We have seen greater numbers exhibited, but we thought the quality was of the very best, and popular varieties did the winning.

In the section for Rocks, Wyandottes, or Orpingtons, White Wyandottes came out on the top, and a wonderful trio they were, shown in grand form. The second prize also went to the same variety, and the third prize to a beautiful trio of Buff Orpingtons, wonderful shape, bone and colour.

In the Any Other Variety Breeding Pens only 17 were entered, against 39 last year. Minorcas were first, and they were a grand lot. Typical massive Indian Game made a good second, and the third were very nice Brown Sussex. Other Varieties shown in this class were Light Sussex, Buttercups, Langshans, Rhode Island Reds, Buff Sussex, Houdans, &c.

The Selling Classes came next in the schedule, and contained many good birds and many bargains, and many future winners were purchased in them.

The Waterfowl Section is always full of interest, and this year was no exception. Rouens were not so strong in numbers, but contained some very good birds. The winners stood out for size and soundness of colour, in fact, even to-day, with all the newer varieties, there is nothing so pretty as a good Rouen.

Aylesbury Ducks made a grand show with a good entry, the winning drake had great size with a beautiful head and bill, but not quite up in feather. The Duck class produced the Medal winner. She was of good size and shape, and won over the Drake by her splendid condition. Several good ducks were in the moult, or some of the awards would have been altered. Indian Runners were strong classes, are type and colour were excellent. Buff Orpington Ducks came up we and a class for Magpie Ducks had a fair entry, although at present this breed does not seem very popular. The Black East Indians were a pretty lot, and the winner stood out for type and richness of colou Khaki Campbells still seem very popular and made a good show.

Any Other Variety, as usual, had a strong entry of 26, and her we found a grand shaped Pekin of nice size and colour winning, witl last year's winning Muscovy second, and a good Cayuga third.

Geese had 21 entries in two classes, against 37 last year, but the quality was very good, and the Medal winning Toulouse Gander wa extra well grown and of nice colour; he also carried off the Ring of the Waterfowl Club. Embdens were more typical than usual, bein very free from keel and gullet.

Turkeys again made a strong section, and the four classes provided for them had a good entry. The Bronze still seem more popular than the Whites.

Bantams still form one of the most attractive sections of the Show, and no section receives greater admiration from the general public, and there is no doubt that they do bring many more people in through the turnstiles to see them. To-day, they are in many cases, the exact miniatures of the larger breeds, and for any large breed to become popular it at once becomes reproduced in miniature. We have already seen Barnevelder Bantams, and some pretty White Leghorn Bantams have been shown at times. Modern Game Bantams had eight classes provided for them again, and they were a grand collection. In Blackreds, the 26 cockerels and the 25 pullets were the two best classes seen here for years. Piles were also strong, especially the cockerels, and the Duckwings were a grand lot. In fact, the pullets were equal to anything seen here for some years.

In the Any Other Colours the winners were mostly Birchins and Brown-reds. Old English had six classes provided for them and contained a grand lot of birds, and they were judged very well indeed. The Medal went to the winning Spangle cock, and he was a beauty, it being a popular win.

Variety Bantams again made a great display, and were well penned, and could be seen to advantage. Black Rosecomb cocks had 16 entries,

and were much better than the hens for quality.

Minorca Bantams had a class and seem as a breed to be making headway. Pekins made two good classes, and Sebrights were very strong, especially the two classes for Silvers, containing, as they did, 28 birds. Japanese, Frizzles, and Polish made a nice show, although we find a very few new names amongst the exhibitors in these breeds.

Wyandotte Bantams, for both exhibition and utility, are daily becoming more popular, and here we saw some of the best birds in this section, especially in the Whites, with 13 cocks and 20 hens, which were wonderfully well judged, the winning hen being a beauty and well shown.

Belgian Bantanis are not so popular and had 25 entries in two classes. Hamburghs were a poor entry, only seven being shown in cocks and 12 in hens. Indian Game Bantams were a wonderful lot,

the 17 hens making a fine display.

Any Other Variety Bantam cocks had 14 entries, the winner being a lovely White Rosecomb, second a Plymouth Rock, and the third a Jubilee Indian. In hens we found 19 entries, and one of the best classes in the Show. The winner was a beautifully barred Scots Grey, a most typical bird all the way from Scotland; second was a nice Light Sussex, and the third a good Light Brahma Bantam.

The limit price for the Bantam Selling classes was again made

£2, with the result that many birds were sold during the Show.

# THE PIGEON SECTION-DAIRY SHOW, 1925.

By W. S. BROCKLEHURST.

THE forty-seventh Annual Show was held on October 20th, 21st. 22nd, and 23rd, 1925, at the Royal Agricultural Hall, London, and was again a great success, as regards the number and quality of the exhibits on view in the Hall, though the receipts were somewhat below those of last year. The Pigeon Section was again up to the standard of former years. The entries were 66 up on last year's Show, the total number being 3.094 as compared with 3.028 at the 1924 Show, which shows that the Dairy Show is as popular with fanciers as ever, notwithstanding the unavoidable disadvantage the Committee are at to stage such a vast number of birds in such a limited space. A new order of staging the varieties was tried before the Show, so that the same varieties should not be staged in the same positions in the aisle every time, but it was found unworkable, and the old places had to be carried out, as the only other way to so alter things is to considerably cut down the classifications in future, which I am sure would not be very acceptable to different Specialist Clubs who support the Dairy Show each year with such good classifications. I sincerely hope that fanciers will remember that the Committee have had this matter before them, and carefully considered it, but regret that under the circumstances could not be altered, much as they would wish it, except as I have stated, by considerably curtailing the entries.

The Pigeon Section is always a very popular section with the general public, which is shown by the number of people who pass through the aisles, and from the number of questions asked about the different breeds of pigeons during the week, and especially with regard to the winners of the medals and different cups offered by British Dairy Farmers' Association and other Specialist Clubs for competition each year.

The winners of the principal trophies offered by the Association for competition this year are as follows.

The Gold Medal for the Best Pigeon in the Show bred in 1925, was awarded to Class 44, Pen 524, Mr. A. Taylor's young Carrier hen, which also won the Carrier Club's Cup for the Best Young Carrier. The Reserve going to Class 121, Pen 1515, Mr. W. Watmough's young African Owl, which also won the Gatty Challenge Cup for the Best Young African Owl. The Jones' Memorial Trophy for the Best Old Bird in the Show was awarded to Class 145, Pen 1752, Mr. A. C. Tattersall's Black Modena cock. Reserve going to Class 17, Pen 207, Mr. H. N. Leighton's Pigmy Pouter cock. The Esquilant Challenge Trophy for the Best Young Bird in Section No. 3 was awarded to Class 176, Pen 2034,

Mr. H. Coalston's Yellow Jacobin, and the Reserve being Class 6, Pen 81. Messrs. Weekes Bros.' Blue Fantail.

The Fulton Challenge Trophy for the Best Young Bird in Section No. 6 was awarded to Class 239, Pen 2902, Mr. W. J. Lee's Ice, Reserve going to Class 158, Pen 1867, Mr. W. F. Holmes' Modena Schietti Self cock.

All the above exhibitors are to be congratulated on having successfully bred and shown a bird of such merit, good enough to carry off one of the above trophies, which so many exhibitors have been striving year after year to carry off, but without success up to the present: the competition gets keener each year and some of the newer breeds are coming well to the front and holding their own against the old so-called high class breeds. It is wonderful the number of grand specimens seen in each breed that are penned at the Dairy Show each year that are not able to win one of the big trophies; one wishes them luck at the next Show. Details of the various varieties are as follows:—

Fantails numbered 173 in 12 classes which, as compared with last year, shows a decrease of 15 entries, with an additional class this year. The classes on the whole were as good as usual and up to the usual high standard. Blues being well to the fore, followed by the Blacks and Saddles; in the Blues there was a good even type throughout, one or two very excellent birds being staged. Young Blues were a grand lot also. Blacks were a good lot, and some very typical birds being shown, but might have been better in colour. Silvers, a very taking class; this colour is making good headway, and some quality birds of good colour were shown. Laced very even class, and birds of a better type are now being shown in addition to being well laced. In the Reds and Yellows some nice birds were staged, but type is still much to be desired, and is far from fixed yet, but they are improving greatly. In the Any Other Colour Class some very good typical Chequers were shown. The Alfred Bates' Perpetual Challenge Cup given by the Fantail (lub for the Best Fantail in the Show, was awarded to Class 2, Pen 14, Mr. Hugh Gordon's White hen, a charming pigeon. The Association Silver Medal winner was found in the young Blue, Class 6, Pen 81, Messrs. Dukes Bros.' young bird.

Posters numbered 26 in four classes, as compared last year with 32 in the same number of classes, a decrease of six. The birds penned were of good type and quality, but it is a great pity that not more Pouters are shown at the Dairy Show to make competition a bit keener.

Pigmy Pouters.—This variety shows an increase again this year over last with 148 entries in 13 classes, the same number as last year, there being eight more entries this year, and the two Judges, although they had a good morning's work, had the job well in hand by the time the galleries were opened to the public, which is a great improvement on past years. The same applies in other big sections where it has been found necessary to have two Judges to get the work done in time for the public to get up in the galleries by 1 o'clock on the first day of the

Show. This variety shows a marked improvement on previous years, and the winner of the Association's Silver Medal, Class 22, Pen 253, Mr. H. N. Leighton's young bird is probably the nearest to the ideal that has yet been produced, and the variety is evidently gaining more admirers. The best birds not being all in a few lofts, and competition is getting keener every year. The Club's Challenge Cup for the Best Blue, Silver or Cream Cock, bred in the current year, was awarded to Class 21, Pen 241, Mr. H. N. Leighton's young bird. The Club's Challenge Cup for the Best Pigmy Pouter Cock, Any Other Colour, was awarded to Class 17, Pen 207, Mr. H. N. Leighton's Black cock, and the Richard Foster Challenge Cup offered by the Club for the Best Red or Yellow Pied Cock was awarded to Class 25, Pen 298, Mr. A. T. Jupe's young Yellow cock. Mr. H. N. Leighton's Pen 207, Class 17, was also Reserve for the Jones' Trophy, a grand pigeon full of quality.

Norwich Croppers were 17 entries down on last year's total of 96 entries in five classes as compared with 79 entries in six classes this year. The quality throughout was very good, especially on the old cock and young Blue Classes, the winner in the Young Blue Hen Class being about perfect. Many of the birds were inclined to be on the shy side, and would not show; the birds were better through the moult than in former years. The Whites were not as good as most years, and only one Yellow was penned. The Bronze Medal of the Association for the Best Young Norwich Cropper was awarded to Mr. H. Whitley's young Blue hen.

Holle Croppers.—Three classes for this variety were put on for the first time this year at the Dairy Show, and brought together 45 entries in the three classes, two for old birds and one young class, 23 old birds turned up and 22 young ones, and were a grand lot, and much commented upon by the public, many of whom had not seen this variety staged before, except an odd one in the Any Other Variety Class. They are being taken up among several good fanciers, and should make great headway in this country. The young birds seen at the Dairy Show last year being of exceptional merit spoke well for next year's entries at the big shows. We hope to see them go ahead.

Carriers numbered 66 in seven classes as compared with 76 in the same number of classes last Show, a decrease of 10, though the quality was far in advance of last year, but I am still sorry to say that many Carriers of to-day that are shown have skulls more like Barbs than the real Carrier of a few years ago. The Carrier Club's Challenge Cup for the Best Young Bird was awarded to Mr. A. Taylor's young hen, the same bird being the winner of the Association Gold Medal for the Best Young Bird bred in 1925 in the Show, a grand Carrier hen, and should be heard of again. The Club's Challenge Cup for the Best Adult Bird going to Mr. F. Meyer's Pen 492, Class 41, the same pen taking the Association Bronze Medal for Best Carrier in Show—a grand yearling bird, and should make a great old bird, with luck.

Barbs had two classes as last year, and 16 the same as last year, also a great falling off from previous years; the quality was good, but this breed seems to be dying out, and very few of the old Barb breeders' names were seen in the Show Catalogue.

Dragoons.—This variety again turned up in force, and had a long way the largest entry in the Pigeon Section, there being 428 entries in 32 classes, an increase on last year's total of 28 more entries with one more class, but the biggest total was in 1924, when the Dragoons numbered 442 entries in 30 classes. The Judge's report on the 1925 bred birds, is as follows:—"The total entry of 223 young Dragoons in the 12 classes provided is, I think, a convincing proof of the continued popularity of the breed. Taken in bulk the Blues bred in the current year, do not I think show any advance in type over the 1924 crop. Blue cocks I found very disappointing; it is not often in a mixed class of Blues and Silvers, that a Silver leads the way, but in this instance I found the winner in a charming Silver exhibited by Dr. C. H. Tattersall, and I looked in vain for a Blue to beat it. This bird also won the "Cotton" Cup for Best Young Cock. The Blue Hen Class contained some good birds, but being penned in the top tier, they were unable to do themselves justice, and did not appeal to an eye looking Blue Chequer cocks were on the whole good on structure. but lacking in quality. The Hen Class was a good one, and some topping hens were shown therein. Red Chequers continue to advance both in type, marking and colour, although many birds were of two mealy a tint. Grizzles just about held their own, the frosted huchill. which puts the finishing touch on a good Grizzle, was much in evidence on the winners, but sadly lacking on many of the runners-up. I found the winner of the "Cotton" Cup for the Best Young Hen in the hen class of this colour, a hen shown by Mr. E. H. Birks, of charming and impressive pose with a very determined outlook, the sort to breed from. Yellows and Reds, to my view, do not seem to be quite so good as they were as regards the young birds, the stout well-set outlook is not quite so strongly in evidence as it was a few years back. The Reds were very few numerically, and for type did not impress me very greatly. Whites. the tail end of the breed, are usually the most difficult colour for a judge to handle to his satisfaction, and this occasion was no exception to the I did not see a young White which would make one feel that I should like to take it home if no one was looking. They seem to lack what I may term Dragoon character; they need a lot more good Yellow blood putting into them. Some of them showed signs of a frill, doubtless the result of too close breeding which brings out any alien blood which may be, in the strain."

The old birds came up well and were put down in good condition, and made a grand show of noted past years' winners. Some of the real Dragoon type were to be seen in these classes.

The George Cotton Challenge Cup for the Best Young Cock, was awarded to Class 68, Pen 761, Dr. C. H. Tattersall's young Silver cock,

the same pen winning the Association Silver Medal for Best Young Dragoon Cock in Show.

The George Cotton Challenge Cup for the Best Young Hen was awarded to Class 77, Pen 938, Mr. E. H. Birks' charming young Grizzle hen, and the same pen was awarded the Association Silver Medal for the Best Young Dragoon Hen in the Show.

The Hewitt Challenge Cup for the Best White Dragoon bred in the current year, was awarded to Class 73, Pen 870, Mr. Cecil Cooper's young White cock. The Challenge Cup for the Best Red or Yellow Dragoon in the Show was awarded to Class 58, Pen 660, Mr. G. Wilkinson's adult hen.

Short-faced Tumblers.—In this section only 57 entries were forth-coming in five classes as compared with 68 in 1925, and 67 in 1924 in the same number of classes, a decrease of 11, and the quality of the exhibits was not so good as in former years, especially in the Almond Classes, few of them possessing the proper ground colour, on the whole they were shown in better condition than last year. These charming little pigeons do not seem to be as popular as it used to be a few years ago, and one regrets to note that since the last Dairy Show one of the oldest and most successful breeders in this variety is no longer with us.

The Association Silver Medal for the Best Short-faced Tumbler bred in 1925 was awarded to Class 83, Pen 1017, Major Godfrey Haselton's young Almond, a sweetly pretty little pigeon.

Long-faced Tumblers—In this section there were 387 entries in the 28 classes, an increase on last year's number, there being 378 entries in 27 classes in 1925, and 347 entries in 27 classes in 1924, made up of 16 classes for Selfs with an entry of 236, as compared with 249 in the same number of classes last year, and the Any Other Variety Longfaced Tumbler Classes had 151 entries in the 12 classes. The Black Self Class, as usual, was well filled, and the competition was very keen, especially in the 1925 Black Cock Class—the quality in this variety was very good indeed, especially in the 1925 birds where a general advance in quality and type was most noticeable than of past years. The improvement was even more noticeable in the Blue, Silver and Chequer Classes, and we hope to see the same improvement in the Mealies another year. In the Any Other Variety Classes the Black Balds were again well to the front, and the quality was very good and competition keen; the Bald Classes, taken on the whole, are showing an all round improvement, and the Association Silver Medal for the Best Long-faced Tumbler bred in 1925, was awarded to Class 103, Pen 1297, Mr. A. C. Tattersall's young Black Bald-head cock. two Mottle Classes came up well; quality was good, over the average, each class contained a very large percentage of better birds than usual. The other classes were also well filled, and many good all round birds were to be seen in the winners

English Owls.—The entry this year was slightly better than the last, there being 82 entries in seven classes as compared with 77 in the same

number of classes in 1924. The young classes were the better filled classes this year, no doubt the better entries were brought about by the new "Gatty Perpetual Challenge Cup," offered for the first time through a generous bequest of the late Mr. A. A. Gatty, who left the Committee of the British Dairy Farmers' Association a sum of £25 for a cup in this section, and also the same amount for a similar cup in the African Owl Section, both for young birds bred in the current year. There were many old birds of good all round typical specimens, and it is pleasing to see that the birds are put down in a much better condition, and looking altogether healthier than in years gone by. We hope to see better entries next year.

African Owls—This section is by far the worst in the Show, and has been so for several years, with the result that only two classes were given last year, and both had to be cancelled. At the request of several fanciers, the Committee again gave a classification of six classes, and with the handsome. Gatty Memorial Trophy. that is now in competition, it was hoped this variety would improve, but one regrets to say that in the six classes only 34 entries were forthcoming, which was very disappointing and most regrettable. However, the quality was exceptionally high, and the 1925 winning young Black which carried off the Gatty Challenge Cup and the Association Silver Medal, stood well away from the others, and was by far the best of the year, and the rest of the exhibits in the Section showed high class merit, not one poor specimen being on view.

Turbits showed an increase on last year's entry of nine. There being 80 entries in eight classes, the same number as last year, and were a grand lot of birds, and shown in good condition, one or two standing out well away from the others. Mr. W. R. Lobb, Pen 1617, Class 133, the winner of the Association Bronze Medal, being an exceptionally good young bird.

Archangels numbered 41 entries in four classes, as compared with 58 in the same number of classes last year, a decrease of 17, which was accounted for in the poor entries in the two old classes. The Judge was disappointed with the old birds, and his comment is as follows:— "The old classes not so numerous or yet so good as I have seen at the Dairy Show. The first prize old cock was certainly a good one, the old hens were rather poor, failing very much on back and pale in eye. The young birds were certainly better, but I should like to see more bronzing on flights and brighter in eye, unfortunately the best under coloured birds were very green in neck, this has always been a fault and will require looking into." The Association Bronze Medal was awarded to Pen 1641, Class 136, Mr. H. Leigh-Lye's young cock.

Modenas again came up well and made a wonderful display with an entry of 329 entries in 34 classes, a slight decrease of 23 on last year's total in the same number of classes. The total was made up of Gazzis 181, and Schiettis 148. The Gazzi Classes were well up to the

standard for type and style, but the colour in some cases was hardly as good as might be expected. Many of the Blues lacked depth of colour and richness of bars. The Bronzes might also be better laced and richer in colour. Black showed an improvement in colour, and birds excelling in type and style had to give way to colour. The Reds have improved a good deal, and several good rich Reds were shown, and as well as showing better styles and type, they are an attractive colour, and one would like to see more fanciers take this colour up. The Schietti Section came up well, and great improvement was to be seen in the Red Laced, and Argents Classes where the type and style of some of the birds shown is not far short of the Gazzis, one or two showed that beautiful fine lacing which is so hard to get, and much desired by Lace breeders. The Black Selfs have made good headway since last year, and quite a number of very good specimens were on view, and are becoming very popular.

The winners of the Modena Club Challenge Cups, and the Association's Silver Medals were as follows:—

Cup for the Best Old Gazzi Cock, Class 139, Pen 1678, Mr. A. E. Sharp's Blue hen.

Cup for the Best Old Gazzi Hen, Class 144, Pen 1752, Mr. A. C. Tattersall's Black cock; this bird was also awarded The Jones' Trophy for Best Old Bird in the Show.

Cup for the Best Old Schietti Cock, Class 156, Pen 1848, Mr. W. S. Brocklehurst's Blue Barred cock.

Cup for the Best Old Schietti Hen, Class 157, Pen 1855, Mr. W. S. Brocklehurst's Blue Barred hen.

Cup for the Best Young Gazzi Cock, Class 146, Pen 1771, Mr. A. C. Tattersall's young Black cock.

Cup for the Best Young Gazzi Hen, Class 147, Pen 1776, Mr. W. S. Brocklehurst's young Black hen.

Cup for the Best Young Schietti Cock, Class 158, Pen 1867, Mr. W. F. Holmes's Black Self cock.

Cup for the Best Young Schietti Hen, Class 161, Pen 1895, Mr. A. H. Lanfear's Barred hen.

The Association's Silver Medal for the Best Gazzi bred in 1925, was awarded to Mr. A. C. Tattersall, Class 146, Pen 1771, young Black cock.

The Association's Silver Medal for the Best Schietti bred in 1925, was awarded to Mr. W. F. Holmes, Class 158, Pen 1867, young Black Self cock. This bird was also reserve for the Fulton Trophy.

Jacobins.—This year six classes were again given in this section, as compared with four last year, two of which had to be cancelled, the six classes numbered 60 entries, an increase of 47 on last year, when the two young classes only brought together 13 birds. The quality of the exhibits was disappointing owing to the birds not being in full feather, but that is why the Dairy Show is not very popular with

Jacobin exhibitors, as it is too early for their birds, and very few are sufficiently advanced to be shown. The winner of the Esquilant Challenge Trophy was found in Mr. Harry Coalston's young Yellow Jacobin, the same bird winning the Association's Bronze Medal for Best Young Birds, Class 176, Pen 2034.

Nuns numbered 81 in five classes, an increase of 11 on last year's entry in the same number of classes, and they made a grand show, and the quality was excellent, and it was much to be regretted that many excellent birds were not in the running owing to the fact that they arrived after the judging had been finished, or they would undoubtedly have been in the prize list. The winner of the Association's Bronze Medal for the Best Cock or Hen bred in 1925, was awarded to Class 179, Pen 2087, Mr. H. G. Daniell's young Black cock.

Oriental Frills showed a decrease of 27 entries in the same number of classes as last year, there being 112 entries in the 14 classes this year, and although they only averaged eight per class, the quality was well up to the previous years. Birds were well balanced in both type, lacing and markings, that were staged in the several varieties. Especially strong in this respect were the Young Any Other Colour Laced Satinettes. The Young Blondinette Classes were rather below the average of preceding years, but no doubt many of these would look better at a later date, and no doubt the Judge had a somewhat difficult task in discriminating, in making his awards when classes are for cocks and hens. The importance of good hens in the breeding pens cannot be over-estimated, and their encouragement in the Show pen would tend towards a better value being placed on the weaker sex.

The Challenge Cup offered by the Oriental Frill Club for the Best Adult was awarded to Class 189, Pen 2178, Mr. C. E. Hope's Blondinette cock. Mr. G. H. Leech's young Oriental Turbit, Class 184, Pen 2139, was awarded the Association's Silver Medal.

Magpies numbered 51 in five classes as compared with 46 entries in four classes last year, an increase of five with one class more. The quality was good all through and the birds are showing a better and more pleasing type and style than a few years ago. The Association's Bronze Medal was awarded to Class 198, Pen 2258, Mr. W. Illingworth & Sons' Black hen, a pigeon which stood right away in its class.

Marthams had the usual one class provided for this breed, and brought together 12 entries, one more than last year. The type in this breed is improving and getting more uniform.

Antwerps.—Again these classes showed a decrease on last year's total, there being only 42 entries in six classes as compared with 56 entries in six classes last year. The old birds turned up better than the 1925 birds, and were shown in wonderful condition, and some of the good last year's young birds were well to the front, as was expected from their wonderful appearance last year in the Show pens. The

Association's Bronze Medal was awarded to Mr. James Walker's young cock, Class 207, Pen 2339, a very promising pigeon.

Show Homers were down on last year's total on the same number of classes, this year there were 152 entries in the 12 classes as compared with 167 entries last year. The adult classes were well up to average for quality, and contained several really good pigeons. The young classes as regards numbers came up well in the Blue and Black Chequers. The exhibits were not up to the usual standard, but in the Any Other Colour, Blue, Silver and Mealies there were some excellent birds. The United Show Homer Challenge Trophy was won by an adult pigeon of good merit, and was found in Mr. G. R. Hartley's hen, Class 210, Pen 2376, and the Association's Silver Medal was won by a young Blue cock of splendid quality and type belonging to Mr. J. W. Swan, Class 219, Pen 2486.

Racing Pigeons.—In this section there was a slight increase on last year's entries, there being 256 entries in the six classes as compared with 249 entries in 1925, but still down on 1924 entries of 304. The disastrous training year of 1924 is still showing its result in the different lofts about the country; last year was a fairly good one. The standard of merit in all classes was well maintained, and the true type of Racing Pigeons with its handsome appearance was very noticeable, and the birds looked very workmanlike. Lieut-Col. A. H. Osman had again given a very handsome Victory Cup No. 2 for the Best Racing Pigeon, to replace the one which was won outright at the last Show. Mr. J. Edmund's young bird, which had flown at least 100 miles during 1925, was awarded this Cup, Class 222, Pen 2549. The same bird was also awarded Lieut.-Col. A. H. Osman's Cup for Best Old Bird, and the Association's Silver Medal for Best Racing Pigeon in Show.

The Lieut.-Col. A. H. Osman's Cup for Best Young Bird was awarded to Messrs. Snow & Watson's young cock, Class 223, Pen 2614.

Exhibition Flying Homers.—This section is again down on last year's total, there being 63 entries in six classes as compared with 97 entries in eight classes in 1924, but there was a great improvement in this section as compared with previous years. Shortness of feather, combined with length of face, but many birds were not through moult, and lacked finish. The Association's Silver Medal was awarded to Class 231, Pen 2805, Messrs. Brooke & Walstenholme's young cock.

Genuine Homers.—Four classes were added to the Dairy Show Schedule this year for this bird, and it brought together in the four classes 47 entries; the quality of the old birds was very good, and a very marked improvement was noticeable in the young birds of a uniform type, but they were not quite through their moult.

Ptarmigan.—The two classes provided for this bird this year brought together 26 entries, which was four less than last year in the same two classes, and the quality was good, and the improvement in

colour of eye and shape of skull seen at last year's Show was well maintained.

Ice.—The one class put in this year for this variety only produced seven entries of this very charming bird, one less than last year. The marking and colour were excellent, and Mr. W. J. Lee's Class 239, Pen 2902, was awarded the Fulton Challenge Trophy.

Strassers.—One class was put in this year for the first time, and brought a good entry of 12 birds, which were well shown and in excellent condition, but with the exception of the winners were poor in quality and type

Swifts.—This one class had 10 entries, as compared with eight entries last year in the one class. The colouring of this variety is certainly most beautiful, and the birds were shown in wonderful condition. We hope that this variety will come up better next year.

Runts.—This section produced the same number of entries in the one class as last year, 16, and was a good class for condition, and the birds were in far better feather than in past years.

Mondains showed a slight increase of two entries in the two classes this year, there being 16 entries in the two classes, but were only a fair class as regards birds and condition.

Maltese.—One class was put in this year for the first time, but had to be cancelled, but that was through the fact that one or two of the Judges acting at this year's Show are Maltese breeders, and therefore unable to exhibit, which otherwise they would have done. The Committee may think well to try this class another year for that reason.

Any Other Variety had two classes provided and were well filled, there being 34 entries in the two, one less than in the previous year, and contained several birds of very high merit, and were a nice collection, there being Scandaroons, Trumpeters, Carneaux, Larks, Fairy Swallows, Plain-headed Fairies, and Copper Blaze-Faces.

Selling Classes numbered eight, four at £4, and four at £2, and brought together 104 birds, a drop on last year's total of 129, and the previous year's total of 138. These classes contained some remarkably good birds, many of which were quite good enough for open competition. The classes being open to Any Variety meant that almost every variety was represented, and very few of any but the very best were shown. The Pouters, Antwerps, and Dragoons were very numerous and showed such type and quality that most of the leading awards were carried off by these varieties; these plums of victory though, were not easily won, as many other varieties strongly contested the positions. Taken as a whole the Limit Classes were quite a feature of the Show, and quite a good few of the birds being claimed.

In conclusion, I have again to repeat that the Show was a great success, and I wish to thank my Assistant Steward, Mr. H. J. Keppel, and my other Stewards for all their help and assistance so ably and willingly given on these occasions, which is the great factor in carrying through a Dairy Show successfully at the Agricultural Hall, London, and I sincerely hope to the entire satisfaction of all who exhibited at the 1925 Show.

I wish to thank all those good and true fanciers who act as my Stewards and Assistant Stewards, and give those services voluntarily and willingly, which is so helpful to the smooth running of a great Show of this kind, and for the splendid way they all worked to get the birds penned in time for judging, and also the award cards up on the pens by lunch time, and to the very careful way the handling of the exhibits was carried out, and packed for return home at the close of the Show. I much appreciate and wish to thank the Secretary and Assistant Secretary and their staff for all the help and assistance they so readily give at any time during the Show when required, and which is always most helpful to the carrying out of the week's work at the Agricultural Hall.

## AWARD OF PRIZES, DAIRY SHOW, 1925.

### DAIRY COWS AND HEIFERS IN MILK.

- THE "BLEDISLOE" CHALLENGE TROPHY (presented by LORD BLEDISLOE, K.B.E.), awarded to the Ayrshire Cattle Herd Book Society for the Best Exhibit of good all-round Dairy Cows. The Cows competing for the Trophy were the first six in the Breed Milking Trials and were considered by the Inspection Judge to be typical specimens of the Breed.
- THE "THORNTON" CHALLENGE CUP (presented by Messrs. JOHN THORNTON & CO.), for the Best Group of three Pedigree Shorthorn Cows and/or Heifers upon Inspection only, awarded to T. L. Martin, for "Hutton Daffodil 2nd," "Barrington Lucy," and "Ashe Wild Duchess."
- THE "THORNTON" CHALLENGE CUP (presented by Messrs. JOHN THORNTON & CO.), for the Best Group of three Pedigree British Friesian Cows and/or Heifers upon Inspection only, awarded to The Hache Herd, for "Haydon Pax," "Hache Akkar Virtue," and "Hache Vespers."
- SPECIAL PRIZE of £10 (offered by Mr. ROBERT L. MOND, J.P.), and SECOND PRIZE of £5 (offered by the COUNTESS DE LA WARR), for Two Animals, the Progeny of any particular Bull, awarded respectively to J. Cochrane, for "Byreholm Viper 2nd," and "Byreholm Diamond" (Ayrshires). Major C. R. Dudgeon for "Cargen Holm Proud Lady 8th," and "Cargen Holm White Stockings 10th" (Ayrshires).
- THE "MORRISON" CHALLENGE TROPHY, value 100 Guineas (presented by Major J. A. MORRISON, D.S.O.), will be awarded to the Owner of the Cow exhibited at three consecutive London Dairy Shows, gaining the greatest total number of points (at the three Shows) upon Inspection, in the Milking Trials and Butter Tests, awarded to A. B. Croxon, for "Spot" (Dairy Shorthorn).
- Class I.—DAIRY SHORTHORN COW.—Entered in or eligible for Coates' Herd Book, or its pedigree sent for such entry previous to the Show, born on or previous to 1st August, 1920. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10) to T. L. Martin, for "Hutton Daffodil 2nd." Second Inspection Prize (£10) D. & P. Rushton, for "Penwortham Bonny Lady." Third Inspection Prize (£3) to F. H. Thornton, for "Kingsthorpe Countess Ruby 2nd." First Milking Trial Prize (£12) and the "Desborough" Cup to Major S. P. Yates, for "Rickerscote Foggathorpe." Second Milking Trial Prize (£6), and Extra Inspection Prize (£5) to T. P. Precee, for "Pencoyd Blanche 2nd." Third Milking Trial Prize (£3 10s.) to G. P. Golden, for "Lady Doreen."
- Class 2.—Darry Shorthorn Cow.—Entered in or eligible for Coates' Herd Book, or its pedigree sent for such entry previous to the Show, born after 1st August, 1920, and previous to 1st August, 1922.—First Inspection Prize (£5) and the "Calvert" Challenge Cup to Viscount Feilding, for "Sudborough Ringlet." Second Inspection Prize (£3), Second Milking Trial Prize (£3 10s.) and Equal for the Shorthorn Society's Prize (£10) to Major R. F. Fuller, for "Chalfield Valentine." Third Inspection Prize (£2), First Milking Trial Prize (£6), and Equal for the Shorthorn Society's Prize (£10), to R. Tustian, for "Greattew Blossom." Third Milking Trial Prize (£2 10s.) to G. P. Golden, for "Lady Maisie,"

- CLASS 3. DARA SHORTHORN HEIFER.—Entered in or eligible for Coates' Herd Book, born on or after 1st August, 1922. First Inspection Prize (£5), and the Shorthorn Society's Prize (£5) to F. H. Thornton, for "Kingsthorpe Countess Ruby 4th," Second Inspection Prize (£3), Third Milking Trial Prize (£2 10s.), and the Shorthorn Society's Prize (£5) to T. L. Martin, for "Ashe Wild Duchess." Third Inspection Prize (£2) to T. L. Martin, for "Barrington Luey." First Milking Trial Prize (£6) to E. A. Smith, for "Longhills Darlington 3rd." Second Milking Trial Prize (£2 10s.) to G. P. Golden, for "Lady Doreen 9th."
- Class 4.—Dairy Shorthorn Cow.—Not eligible for Classes 1 or 2. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society First Inspection Prize (£10), First Milking Trial Prize (£12), the Dairy Shorthorn Association's Prize (£10), and Extra Inspection Prize (£5) to A. B. Croxon, for "Spot." Second Inspection Prize (£3) to H. P. Mortimer, for "Rosaline." Third Inspection Prize (£3) to J. H. Robinson, for "Martha." Second Milking Trial Prize (£6) to Kidner Bros., for "Stokeley Cross Beauty." Third Milking Trial Prize (£3 10s.) to H. P. Mortimer, for "Ruth 3rd."
- Class 5.—Darry Shorthorn Heifer.—Born on or after 1st August, 1922. Not eligible for Class 3.—First Inspection Prize (£5) and First Milking Trial Prize (£6) to J. H. Robinson, for "Watercrook Ruby," Second Inspection Prize (£3) and Second Milking Trial Prize (£3 10s.) to W. H. Phipps, for "Faith." Third Inspection Prize (£2) to J. Pierpont Morgan, for "Cowship 3rd."
- ('lass 6,—Lincolnshire Red Shorthorn Cow.—Entered in or eligible for the Herd Book of the Lincolnshire Red Shorthorn Association. Cows entered in this Class must have yielded a minimum of 7,000 lbs. at five years old of over, or 5,250 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.

  First Inspection Prize (£10) and Extra Inspection Prize (£5) to F. R. Wood, for "Bendish Ada 5th." Second Inspection Prize (£3) to B. G. Bowser, for "Scothern Mystic." Third Inspection Prize (£3) and First Milking Trial Prize (£12) to J. Evens & Son, for "Burton Amy 7th." Second Milking Trial Prize (£6) to J. Evens & Son, for "Burton Hempy 6th." Third Milking Trial Prize (£3 lbs.) to Little Green Estates Co., for "Langford Castle 5th."
- Class 7.—Lincolnshire Red Shorthorn Heifers.—Born on or after 1st August, 1922. Entered in or eligible for the Herd Book of the Lincolnshire Red Shorthorn Association. First Inspection Prize (£5) and First Milking Trial Trial Prize (£8 10s.) to 8. Reading, for "Langford Polly 18th." Second Inspection Prize (£3) and Third Milking Trial Prize (£2 10s.) to J. Evens & Son, for "Burton Royal Starlight 12th." Third Inspection Prize (£2) to J. Evens & Son, for "Burton Vic 19th." Second Milking Trial Prize (£5) to J. Evens & Son, for "Burton Hempy 9th."
- Class 8.—British Friesian Cow.—Born on or previous to 1st August, 1920. Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lbs., at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10) and Extra Inspection Prize (£5) to B. Parkinson, for "Beecles Gloria." Second Inspection Prize (£5), First Milking Trial Prize (£12), and the "Spencer" Challenge Cup to S. Pyman, for "Felhampton Susan," Third Inspection Prize (£3) to Lord Rayleigh, for "Terling Torch 13th.' Second Milking Trial Prize (£6) to the Hache Herd, for "Haydon Pax." Third Milking Trial Prize (£3 10s.) to Lord Barnby, for "Walden Lena."

- Class 9.—British Friesian Cow.—Born after 1st August, 1920, and previous to 1st August, 1922. Entered in or eligible for the Herd Book. First Inspection Prize (£5) and Third Milking Trial Prize (£2 10s.) to W. Twentyman, for "Winchester Musk." Second Inspection Prize (£3) and First Milking Trial Prize (£6) to C. W. H. Glossop, for "Lund (imp. 1922) Blauche 22nd." Third Inspection Prize (£2) to C. W. H. Glossop, for "Lund Juliet." Second Milking Trial Prize (£3 10s.) to B. Parkinson, for "Thurston Karel's Emily."
- Class 10.—British Friesian Heifer.—Born on or after 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and First Milking Trial Prize (£6) to J. Bromet, for "Golf Dornt 2nd." Second Inspection Prize (£3) and Second Milking Trial Prize (£3 10s.) to E. Furness, for "Hamels Eleanor." Third Inspection Prize (£2) to W. H. R. Gilbert, for "Haydon Bountiful 3rd."
- Class 11.—South Devon Cow.—Entered in or eligible for the Herd Book of the South Devon Herd Book Society.—Cows entered in this Class must have yielded a minimum of 7,500 lbs. at five years old or over, or 5,600 lbs., at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7) and Extra Inspection Prize (£5) to W. Hunt, for "Milkmaid 9th." Second Inspection Prize (£4), the South Devon Herd Book Society's Prize (£5), First Milking Trial Prize (£8 10s.), and the South Devon Herd Book Society's Challenge Cup to G. Wills, for "Snowdrop 2nd."
- Class 12.—Dairy South Devon Cow.—Entered in or eligible for the Herd Book of the Recorded Dairy South Devon Cattle Society.—Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7) to J. E. Furneaux, for "Jef Queeme." Second Inspection Prize (£4), Third Milking Trial Prize (£2 10s.), and Extra Inspection Prize (£5) to T. Evens, for "Ramsland Dainty." Third Inspection Prize (£2) and First Milking Trial Prize (£8 10s.) to G. Furneaux, for "Luson Milkmaid." Second Milking Trial Prize (£5) to R. Hall, for "Ferry Lady 2nd."
- Class 13.—Devon Cow.—Entered in or eligible for the Herd Book or entered in the Supplemental Register of such Herd Book.—Cows entered in this Class must have yielded a minimum of 6,500 lbs, at five years old or over, or 4,800 lbs, at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7) and the "Busk" Challenge Cup to J. H. Chick, for "Wynford Dahlia." Second Inspection Prize (£4) and Extra Inspection Prize (£5) to W. D. Chick, for "Lovely 4th." Third Inspection Prize (£2) to N. D. Lupton, for "Compton Happiness." First Milking Trial Prize (£8 10s.) to A. T. Loram, for "May." Second Milking Trial Prize (£5) to A. T. Loram, for "Janet." Third Milking Trial Prize (£2 10s.) to R. A. Clarke & Sons, for "Gentle."
- Class 14.—Red Poll Cow.—Born on or previous to 1st August, 1920. Entered in or eligible for the Herd Book.—Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7) and Extra Inspection Prize (£5) to W. Scrimgeour, for "Tendring Floss 29th." Second Inspection Prize (£4) and Second Milking Trial Prize (£5) to Major J. A. Morrison, D.S.O., for "Hutton Dahla 2nd." Third Inspection Prize (£2) and First Milking Trial Prize (£8 10s.) to the Duchess of Newcastle, for "Hardwick Ashberry." Third Milking Trial Prize (£2 10s.) to W. R. Glazebrook, Junr., for "Gressenhall Red Berry."

- Class 15.—Red Poll Cow.—Born after 1st August, 1920, and provious to 1st August 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£7) and Third Milking Trial Prize (£2 10s.) to J. B. Dimmock, for "Shotford Lady Mary 5th." Second Inspection Prize (£4), First Milking Trial Prize (£8 10s.), and the Red Poll Cattle Society's First (£5) to C. F. Newton, for "Saham Leezie." Thurd Inspection Prize (£2) and Second Milking Trial Prize (£5) to Mrs. R. M. Foot, for "White Hill Pansy."
- Class 16.—Red Poll Heifer.—Born on or after 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5), First Milking Trial Prize (£6), and the Red Poll Cattle Society's Prize (£5) to C. F. Newton, for "Saham Darker Draught." Second Inspection Prize (£3) to F. W. Leach, for "Meddler Gleam." Third Inspection Prize (£2) and Second Milking Trial Prize (£3 10s.) to Major J. A. Morrison, D.S.O., for "Basildon Plotter 2nd." Third Milking Trial Prize (£2 10s.) to Major J. A. Morrison, D.S.O., for "Hutton Apricot 2nd."
- Class 17.—Blue Albion Cow.—Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10), First Milking Trial Prize (£12), and Extra Inspection Prize (£5) to J. D. Seals, for "Pike Verocity." Second Inspection Prize (£5) to Lt.-Col. W. E. Harrison, for "Bramshall Joan." Third Inspection Prize (£3) and Third Milking Trial Prize (£3 l0s.) to J. D. Seals, for "Bradbourne Giddy Girl." Second Milking Trial Prize (£6) to J. D. Seals, for "Pike Venice."
- Class 18.—Welsh Black Cow.—Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 7,000 lbs. at five years old or over, or 5,250 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7) and First Milking Trial Prize (£8 10s.) to C. W. Crompton, for "Hall Green Gift." Second Inspection Prize (£4), Second Milking Trial Prize (£5), and Extra Inspection Prize (£5) to J. B. Jones, for "Mwynig Hunod."
- Class 19.—Ayrshire Cow.—Cows entered in this Class must have yielded a minimum of 7,500 lbs. at five years old or over, or 5,600 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), First Milking Trial Prize (£8 l0s.), Extra Inspection Prize (£5) the "Barham," "Rowallan," and "Shirley" Challenge Cups to J. Johnstone, for "Millantae Mayflower." Second Inspection Prize (£4) and Second Milking Trial Prize (£5) to A. & A. Kirkpatrick, for "Dalpeddar Flora." Third Inspection Prize (£2) to O. D. Maxted, for "Rigg Rosie." Third Milking Trial Prize (£2 l0s.) to F. H. Sanderson, for "Round Bush Sunboam 2nd."
- Class 20.—AYRSHIRE HEIFER.—Registered or eligible for registration with a number in the Herd Book or in the Appendices. Born on or after 1st August, 1922.—First Inspection Prize (£5) and Third Milking Trial Prize (£2 10s.) to Major C. R. Dudgeon, for "Cargen Holm White Stockings 10th." Second Inspection Prize (£3) and First Milking Trial Prize (£6) to J. Cochrane, for "Byreholm Viper 2nd." Third Inspection Prize (£2) to A. W. Montgomerie, for "Lessnessock Daisy Chain 4th." Second Milking Trial Prize (£3 10s.) to H. J. Clark, for "Kilfillan Fillet."
- Class 21.—Guernsey Cow.—Born on or previous to 1st August, 1920. Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old, either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), First Milking Trial Prize (£8 10s.), Extra Inspection Prize (£.)

- and the "Stagenhoe" Challenge Cup to T. R. Bolitho, for "Tregve Maze." Second Inspection Prize (£4) to W. Dunkels for "Loulou of Goodnestone." Third Inspection Prize (£2) to A. Chester Beatty, for "Flossy of Bella Cottage." Second Milking Trial Prize (£5) to W. F. Trumper, for "Dahlia Polly 2nd."
- Class 22.—Guernsey Cow.—Born after 1st August, 1920, and previous to 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and Third Milking Trial Prize (£2 10s.) to A. Chester Beatty, for "Cheriton Fashion." Second Inspection Prize and Second Milking Trial Prize (£3 10s.) to J. B. Body, for "Morland Lady Richmond." Third Inspection Prize (£2) to W. F. Trumper, for "Rangebourne Rosie." First Milking Trial Prize (£6) to Mrs. D. Corbett, for "Hockley Ivy 2nd."
- Class 23.—Guernsey Heifer.—Born on or after 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and First Milking Trial Prize (£6) to A. Chester Beatty, for "Calchill Peaceful." Second Inspection Prize (£3) to Viscount Falmouth, for "Tregothnan Princess Royal." Third Inspection Prize (£2) and Second Milking Trial Prize (£3 10s.) to "Calchill Sall." Third Milking Trial Prize (£2 10s.) to W. F. Trumper, for "Rubella 2nd of Sarnia."
- Class 24.—Jersey Cow.—English or Island bred. Born on or previous to 1st August, 1920. Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8.000 lbs. at five years old or over, or 6,000 lbs. at under five years old, either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), Second Milking Trial Prize (£5), and the "Blythwood" Challenge Bowl to Mrs. H. Briggs, for "Lily of the Valley." Second Inspection Prize (£4) to J. J. Hoyle, for "Lady Vedas 6th." Third Inspection Prize (£2) to R. Bruce Ward, for "Miranda's Lass." First Milking Trial Prize (£8 10s.) to R. Bruce Ward, for "Pirouette." Third Milking Trial Prize (£2 10s.) to the Hon. A. A. P. Henderson, for "Windlesham Windflower."
- Class 25.—Jersey Cow.—English or Island bred. Born after 1st August, 1920, and previous to 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5), First Milking Trial Prize (£6), and Extra Inspection Prize (£5) to G. Cross, for "Roberta's Star 2nd." Second Inspection Prize (£3) to the Hon. A. A. P. Henderson, for "Danbury Prohibition." Third Inspection Prize (£2) to R. Bruce Ward, for "Philandra." Second Milking Trial Prize (£3 10s.) to J. Pierpont Morgan, for "Tidy Mabel." Third Milking Trial Prize (£2 10s.) to Mrs. E. Watts, for "Essence Pride."
- Class 26.—Jersey Heifer.—English or Island bred. Born on or after 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) to Mrs. E. Watts, for "Colombier Eminence." Second Inspection Prize (£3) and Second Milking Trial Prize (£3 10s.) to R. Bruce Ward, for "Pavlova." Third Inspection Prize (£2) to E. A. Strauss, for "Kingston Princess Aldan." First Milking Trial Prize (£6) to G. Cross, for "Doreon." Third Milking Trial Prize (£2 10s.) to R. Bruce Ward, for "Martingold."
- Class 27.—Kerry Cow.—Entered in or eligible for the Hord Book, Cows entered in this Class must have yielded a minimum of 6,000 lbs. at five years old or over, or 4,500 lbs. at under five years old, either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£5), First Milking Trial Prize (£6), Extra Inspection Prize (£5), the "National Milk" and British Kerry Cattle Society's Challenge Cups to Lady Fitzgerald, for "Buckland Peace 2nd." Second Inspection Prize (£3) to the Kerry Estates, Ltd., for "Valencia Eileen 3rd." Third Inspection Prize (£2) and Second Milking Trial Prize (£3 10s.) to Brig. Gen. Ll. Palmer, for "Coquet Gipsy." Third Milking Trial Prize (£2 10s.) to Capt. N. Zambra & C. Williamson-Milne, for "Bucklurst Elphin."

- Class 28.—Kerry Heifer.—Born on or after 1st August, 1922. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and First Milking Trial Prize (£6) to Capt. N. Zambra and C. Williamson-Milne, for "Castle-lough Missie," Second Inspection Prize (£3) and Third Milking Trial Prize (£2 10s.) to Capt. N. Zambra and C. Williamson-Milne, for "Hattingley Beauty." Third Inspection Prize (£2) and Second Milking Trial Prize (£3 10s.) to Lady Fitzgerald, for "Buckland Emme."
- Class 29.—Dexter Cow.—Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 5,000 lbs. at five years old or over, or 3,750 lbs. at under five years old, either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£5), First Milking Trial Prize (£6), and the "Nutt" Challenge Cup to T. A. Stephens, for "Just Found of Hookstile." Second Inspection Prize (£3), Second Milking Trial Prize (£3 lbs.), and Extra Inspection Prize (£5) to H. F. Earl, for "Bridesmaid." Third Inspection Prize (£2) to Col. W. O. Gibbs, for "Barrow Bee 6th."
- Class 30.—Dexter Heifer.—Born on or after 1st August, 1922. Entered in or eligible for the Herd Book. First Inspection Prize (£5) and First Milking Trial Prize (£6) to Col. W. O. Gibbs, for "Barrow Biscuit 2nd."
- Class 31.—Cow of any Breed.—Animals entered in this Class must be milked three times daily, but will not be allowed to compete with Animals milked twice daily for Milking Trial and Butter Test Prizes and Trophies. Cows entered in this class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old, either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£8) and Third Milking Trial Prize (£2) to Lord Rayleigh, for "Terling Sky 8th" (British Friesian). Second Inspection Prize (£5) and Second Milking Trial Prize (£5) to W. G. White & Sons, for "Larbourne Octavia" (British Friesian). Third Inspection Prize (£2) to H. G. Howard, for "Pitsea Spider" (British Friesian). First Milking Trial Prize (£8) to C. B. Tubbs, for "Terling Ivory 8th" (British Friesian).

#### BUTTER TESTS.

- Shorthorns, entered in Classes 1, 2, 3, 4, 5, 6, and 7, First Prize (£10 and Silver Medal) and the "George Bateman Nelson" (Coronation) Challenge Cup to Major S. P. Yates, for "Rickerscote Foggathorpe," Second Prize (£5 and Bronze Medal) to J. Evens & Son, for "Burton Amy 7th." Third Prize (£3) to J. Evens & Son, for "Burton Hempy 6th." Fourth Prize (£2) to S. Reading, for "Langford Queen 7th."
- BRITISH FRIESIANS, entered in Classes 8, 9, and 10, —First Prize (£10 and Silver Medal) to The Hache Herd, for "Haydon Pax." Second Prize (£5 and Bronze Medal) to B. Parkinson, for "Thurston Karel's Emily." Third Prize (£3) to S. Pyman, for "Felhampton Susan." Fourth Prize (£2) to The Hache Herd, for "Hache Akkar Virtue."
- Red Polls, entered in Classes 14, 15, and 16.—First Prize (£5 and Silver Medal) to W. Scrimgeour, for "Tendring Floss 29th." Second Prize (£3 and Bronze Medal) to C. F. Newton, for "Saham Darker Draught."
- Avrshires, entered in Classes 19 and 20.—First Prize (£5 and Silver Medal) to W. Adamson, for "Harleyholm Rosebud 2nd." Second Prize (£3 and Bronze Medal) to Mrs. H. Craufurd, for "Dunlop Harpsichord." Third Prize (£2) to Q. Dunlop, for "Greenan Kate 6th."
- Guernseys, entered in Classes 21, 22, and 23.—First Prize (£5 and Silver Medal) to T. R. Bolitho, for "Tregye Maze." Second Prize (£3 and Bronze Medal) to J. B. Body, for "Morland Lady Richmond." Third Prize (£2) to Sir James Remnant, Bart, for "Southern Starette."

- Jerseys, entered in Classes 24, 25, and 26 First Prize (£5 and E. J. C. S. Gold Medal) to R. Bruce Ward, for "Pirouette." Second Prize (£3 and E. J. C. S. Silver Medal) and the "National" Butter Challenge Cup to F. B. Imbert-Terry, for "Blue Hayes Sporran." Third Prize (£2 and E. J. C. S. Bronze Medal) to G. Cross, for 'Roberta's Star 2nd"
- Kerries, entered in Classes 27 and 28.—First Prize (£5 and Silver Medal) to Lady Fitzgerald, for "Buckland Peace 2nd." Second Prize (£3 and Bronze Medal) to J. W. Towler, for "Vaddy Mournemore." Third Prize (£2) to Capt. N. Zambra and C. Williamson-Milne, for "Hattingley High Kick."
- Any other Breed, entered in Classes 11, 12, 13, 17, 18, 29, and 30—Prizes of £3 each to G. Wills for "Snowdrop 2nd" (South Devon); R. Hall, for "Ferry Lady 2nd" (Dairy South Devon); A. T. Loram, for "May" (Devon); Lt.-Col. W. E. Harrison, for "Bramshall Joan" (Blue Albion); C. W. Crompton, for "Hall Green Gift" (Welsh Black); H. F. Earl, for "Bridesmaid" (Dexter). Prizes of £2 each to A. T. Loram, for "Janet" (Devon); J. D. Seals, for "Pike Venice" (Blue Albion); Col. W. O. Gibbs, for "Barrow Bee 6th" (Dexter).

Cows entered in Class 31-No award.

#### BULLS.

- Class 32.—Dairy Shorthorn Bull.—Entered in or eligible for Coates' Herd Book, born previous to 1st August, 1923.—First Prize (£10) to the Earl of Bessborough, for "Bessborough Polonius." Second Prize (£5) to L. Hignett, for "Kelmscott Imperialist 71st." Third Prize (£3) to J. S. Corby, for "Cherry Duke." Fourth Prize (£2) to J. Pierpont Morgan, for "Buckswood Fusilier."
- Class 33.—Dairy Shorthorn Bull.—Entered in or eligible for Coates' Herd Book, born on or after 1st August, 1923.—First Prize (£10) to R. N. Tory, for "Anderson Champion Bates." Second Prize (£5) to Viscount Feilding, for "Foxhill Telluria Boy." Third Prize (£3) to T. L. Martin, for "Cheekendon Marcus." Fourth Prize (£2) to R. Tustian, for "Sorbrook Clarence."
- Class 34.—British Friesian Bull.—Entered in or eligible for the Herd Book, born on or after 1st August, 1923.—First Prize (£5) to Friend Sykes, for "Richings Sir Kenneth." Second Prize (£3) to H. Neaverson, for "Haydon Cherry Segis."
- Class 35.—Red Poll Bull.—Entered in or eligible for the Herd Book, born after 1st August, 1923, and on or prior to 1st August, 1924.—First Prize (£5) to Major J. A. Morrison, D.S.O., for "Basildon Watchman." Second Prize (£3) to Major J. A. Morrison, D.S.O., for "Hutton Bright Boy." Third Prize (£2) to W. R. Glazebrook, Junr., for "Lydiate Red Robe."
- Class 36.—Jersey Bull.—Entered in or eligible for the Herd Book, born on or after 1st August, 1922.—First Prize (£10) to H. S. Mountain, for "Sir Laurel." Second Prize (£5) to G. Cross, for "Penshurst Cocur de Lion." Third Prize (£3) to R. Bruce Ward, for "Sir Lovat."

#### SHE-GOATS.

#### MILKING COMPETITION FOR GOATS OF ANY VARIETY.

- The "Dewar" Challenge Cup for Goat and Goatling awarded to Mrs. A. Abbey, for "Didgemere Dream" (Anglo-Nubian Swiss) and "Didgemere Design" (British Alpine).
- Class 37.—SHE-GOAT qualified as "Star or 'Q' Star Milker."—First Prize (£6 and Silver Medal), the "Tremedda Selene" Challenge Cup, the "Dewar" Challenge Trophy, the "Baroness Burdett-Coutts" Challenge Cup, and Challenge Certificate to Mrs. A. Abbey, for "Didgemere Dream" (Anglo-Nubian Swiss). Second Prize (£3) to Mrs. Morcom, for "Champion Leazes

- Fortitude" (Anglo-Nubian Swiss). Third Prize (£1 10s.) to Mrs. A. Abbey, for "Didgemere Ding" (Anglo-Nubian Swiss). The "Pomeroy" Challenge Cup to Miss K. Pelly, for "Nash Bellona" (Anglo-Nubian).
- Class 38.—She-Goats not eligible for Class 37.—First Prize (£6 and Silver Medal) to Mrs. A. Abbey, for "Didgemere Dove" (Anglo-Nubian Swiss). Second Prize (£3) to Mrs. F. J. Browell, for "Play of Bashley" (Anglo-Nubian Swiss). Third Prize (£1 10s.) to Miss M. Harrison, for "Myrtle."

#### INSPECTION CLASSES.

- The "Riding" Challenge Cup for best group of three Goats awarded to Mrs. A. Abbey, for "Didgemere Dawdler" (British Alpine), "Didgemere Dream" (Anglo-Nubian Swiss), and "Didgemere Design" (British Alpine).
- Class 39.—She-Goat, Toggenburg, entered in the Toggenburg Section of the Herd Book, or eligible for entry therein.—First Prize (£2 10s.), Breed Challenge Certificate, and B. G. S. Challenge Certificate to P. Wainwright, for "Fryston Senna." Second Prize (£1 5s.) to Miss Alexander, for "Stockwell Correopsis." Third Prize (15s.) to Mrs. Morcom, for "Berones."
- Class 40,-She-Goat, British Toggenburg,-No entry.
- Class 41.—She-Goat, British Alpine.—First Prize (£2 10s.) to Mrs. A. Abbey, for "Didgemere Dawdler," Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Dehlah." Third Prize (15s.) to Mrs. F. J. Browell, for "Pogo of Bashley."
- Class 42.—She-Goat, Saanen.—Entered in or eligible for entry in the Swiss or Saanen Section of the Herd Book.—First Prize (£2 10s.) and Breed Challenge Certificate to Miss C. Booth, for "Springfield Fidelity."
- Class 43.—She-Goat, Anglo-Nubian, being any Goat entered in the Anglo-Nubian Section of the Herd Book, or eligible for entry therein.—First Prize (£2 10s.) and Breed Challenge Certificate to Miss K. Pelly, for "Nash Bellona." Second Prize (£1 5s.) to Miss K. Pelly, for "Theydon Annette." Third Prize (15s.) to R. Turner, for "Herne Bay Princess."
- Class 44.—She-Goat, Any other Variety, not eligible for previous Classes.— First Prize (£2 10s.) and the British Goat Society's Challenge Cup to Mrs. A. Abbey, for "Didgemere Dream" (Anglo-Nubian Swiss). Second Prize (£1 5s.) to Mrs. Morcom, for "Champion Leazes Fortitude" (Anglo-Nubian Swiss). Third Prize (15s.) to Mrs. A. Abbey, for "Didgemere Ding" (Anglo-Nubian Swiss).
- Class 45.—She-Goat that is recorded under a recognised Milk Recording Society.—Cancelled.
- Class 46.—Goatling, Toggenburg and British Toggenburg.—Over one year but not exceeding two years.—First Prize (£2 10s.) and the "Toggenburg" Challenge Cup to P. Wainwright, for "Fryston Stella." Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Deborah." Third Prize (15s.) to Mrs. R. E. Wroughton, for "Emanuel Phœbe."
- (!lass 47.—Goatling, British Alpine.—Over one year, but not exceeding two years.—First Prize (£2 10s.) and B.G.S. Bronze Medal to Mrs. A. Abbey, for "Didgemere Design." Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Dorothy." Third Prize (15s.) to Mrs. A. Abbey, for "Didgemere Duck."
- Class 48.—Goatling, Saanen or British Saanen.—Over one year, but not exceeding two years.—First Prize (£2 10s.) to Miss C. Booth, for "Springfield Unity." Second Prize (£1 5s.) to Mrs. Morcom, for "Cornish Snowdrop." Third Prize (15s.) to Miss C. Booth, for "Springfield Verity."

- Class 49.—Goatling, Anglo-Nubian.—Entered in or engible for entry in the Anglo-Nubian Section of the Herd Book.—Over one year, but not exceeding two years.—First Prize (£2 10s.) to Miss K. Pelly, for "Theydon Beryl." Second Prize (£1 5s.) to Miss K. Pelly, for "Theydon Angelica." Third Prize (15s.) to Miss K. Pelly, for "Theydon Butterfly."
- Class 50.—Goatling, any other Variety.—Not [eligible for previous Classes.—Over one year, but not exceeding two years.—First Prize (£2 10s.) to Miss K. Pelly, for "Wendy of Westons" (Anglo-Nubian Swiss). Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Dorcas" (Anglo-Nubian Swiss). Third Prize (15s.) to Miss N. O'Donnell, for "Ridgeway Rosaphele" (Anglo-Nubian Swiss).

#### CHEESE.

- Class 51.—STILTON (6 Cheeses).—First Prize (£7) to The United Dairies (Wholesale) Ltd., Harby. Second Prize (£4) to The Cropwell Bishop Darry Co., Ltd. Third Prize (£2) to The Stathern and District Dairy, Ltd.
- Class 52.—Stilton (18 Cheeses).—First Prize (£10 and Silver Medal) to J. M. Nuttall & Co., Ltd. Second Prize (£5) to The United Dairies (Wholesale) Ltd., Harby. Third Prize (£3) to H. Thompson & Sons, Ltd.
- Class 53.—Cheddar Truckles (6 Cheeses).—First Prize (£7) to W. Cole. Second Prize (£4) to W. H. Collins. Third Prize (£2) to G. R. Cole.
- Class 54.—Cheddar (4 Cheeses).—First Prize (£7) to F. Portch. Second Prize (£4) to T. Logan. Third Prize (£3) to W. Cole. Fourth Prize (£2) to J. Corrie. Fifth Prize (£1) to Messrs. Campbell.
- Class 55.—CHEDDAR (12 Cheeses).—First Prize (£15 and Silver Medal), the "Lord Mayor's" Champion Cup, and the "N.K.J." Challenge Cup to S. T. White. Second Prize (£10) to Messrs. Campbell. Third Prize (£7) to J. P. Hunter. Fourth Prize (£5) to A. H. Stevenson. Fifth Prize (£3) to D. Houston.
- Class 56.—Colonial Cheddar, Coloured or Uncoloured (4 Cheeses not less than 60 lbs. each). First Prize (Gold Medal) and the "Hansen" Challenge Trophy to W. C. Taylor. Second Prize (Silver Medal) to G. Bain. Third Prize (Bronze Medal) to H. E. Donnelly.
- Class 57.—CHESHIRE (12 Cheeses).—First Prize (£15), the "Robert Barbour" Prize (£5), the "Lord Mayor's" Champion Cup, and the "Fullwood & Bland" Challenge Cup to O. Hesketh. Second Prize (£10) to W. H. Hobson. Third Prize (£7) to P. H. Walley. Fourth Prize (£5) to W. E. Moore. Fifth Prize (£3) to C. F. Hobson.
- Class 58.—CHESHIRE (4 Coloured Cheeses, not less than 40 lbs. each).—First Prize (£7) to W. H. Hobson. Second Prize (£4) to G. Sutton. Third Prize (£2) to C. E. Parton.
- Class 59.—Cheshire (4 Uncoloured Cheeses, not less than 40 lbs, each).—First Prize (£7) to W, H. Hobson. Second Prize (£4) to P. H. Walley. Third Prize (£2) to W. E. Moore.
- Class 60.—CHESHIRE (4 Cheeses, not less than 40 lbs. each).—Open only to those who have never won a Prize for Cheshire Cheese at any Show of the British Dairy Farmers' Association.—First Prize (£5) to W. W. Hockenhull. Second Prize (£3) to G. Sutton. Third Prize (£2) to A. Hughes.
- Class 61.—Factory.—To be manufactured at and exhibited by a recognised Cheese Factory dealing with a minimum of 500 gallons of nilk daily (10 Cheeses, any Variety, not less than 28 lbs. each).—First Prize (£7) to The Cheddar Valley Dairy Co., Ltd. Second Prize (£4) to C. M. Hallett. Third Prize (£2) to Wathes Bros. Fourth Prize (£1) to Cary & Grimsdell.

- Class 62 Leicester (4 Cheeses) First Prize (£4) to H. Forryan, Second Prize (£3) to E. Ball & Sons, Third Prize (£2) to H. Knight & Co.
- Class 63. Lancashhre (4 Cheeses),—First Prize (£4) to J. Exton. Second Prize (£3) to The British Dairy Institute. Third Prize (£2) to J. Whiteside.
- Class 64.—Derby (4 Uncoloured Cheeses, not less than 25 lbs. each).—First Prize (£4) to H. Richardson. Second Prize (£3) to The Brailsford Dairy Farmers' Association, Ltd., Third Prize (£2) to The British Dairy Institute.
- Class 65.—Double Gloster (4 Cheeses, from 26 lbs. to 30 lbs each, total weight not to exceed 120 lbs.) —First Prize (£4) to Mrs. W. Haine. Second Prize (£3) to Miss H. M. Naish. Third Prize (£2) to J. Taylor.
- Class 66.—SINGLE GLOSTER (4 Cheeses, from 13 lbs. to 15 lbs. each, total weight not to exceed 60 lbs.).—First Prize (£4) to E. F. Jones. Second Prize (£3) to Mrs. W. Hame. Third Prize (£2) to L. Shield.
- Class 67 Caerphilly (4 Cheeses, not exceeding 8 lbs each.)—First Prize (£4) to C H. Raymond. Second Prize (£3) to Mrs. C. Woodward. Third Prize (£2) to The Cheddar Valley Dairy Co, Ltd.
- Class 68, —Wensleydale (6 Cheeses, Blue-moulded), —First Prize (£4) to The British Dairy Institute Second Prize (£3) to A. Rowntree & Son.
- Class 69.—SMALLHOLDER PRESSED (2 Cheeses under 8 lbs., but over 4 lbs each)
  —First Prize (£3) and the "Walker" Challenge Cup to Miss E. M. Madge.
  Second Prize (£2) to Miss C. Fry. Third Prize (£1) to W. A. Tucker & Son.
  Fourth Prize (10s) to Mrs. W. J. Acreman.
- (!lass 70.—Smallholder Pressed (2 Cheeses, not exceeding 4 lbs each).—First Prize (£3) and the "McWilliam" Fruit Dish to Mrs. Gadd. Second Prize (£2) to P. G. Hicks. Third Prize (£1) to Miss E. M. Madge. Fourth Prize (10s.) to Miss H. M. Naish.
- Class 71.—SMALL CHEDDAR (2 Cheeses, made at home, from 8 lbs. to 10 lbs. each).—
  Open to pupils who have attended County Travelling Cheese Schools during
  1924 or 1925.—First Prize (£3) to Miss K. M. Preece. Second Prize (£2) to
  A. W. Knapman. Third Prize (£1) to Miss D. Hunt. Fourth Prize (10s.) to
  Miss I. Arnold.
- Class 72.—SMALL CHESHIRE (2 Cheeses, made at home, from 8 lbs. to 10 lbs. each).
   —Open to pupils who have attended County Travelling Cheese Schools during 1924 or 1925.—First Prize (£3) to C. W. Hobson. Second Prize (£2) to A. P. Sadler. Third Prize (£1) to J. G. Kinsey. Fourth Prize (10s.) to T. Evans.
- Class 73. --Inter-County Competition. For the Best Collection of Small-Holder Cheese made by the persons who have received instruction in Cheesemaking at a County Council Travelling Cheese School during 1922—1925. The Head Teacher or County Organiser in each County to make the entry, which shall consist of six individual Competitors whose names shall be stated at the time of entry. Each Competitor's Exhibit shall consist of four cheeses—manufactured in Competitors' own dairies—of not more than 8 lbs. each in weight, and the number of distinct varieties and types are taken into consideration when making Awards. The prizes to be allocated: One half to the successful Competitors and one half to the County Teacher or Teachers. A Certificate of Mer't will be awarded by the British Dairy Farmers' Association to each individual competitor receiving a Prize. First Prize (the "Inter-County" Challenge Shield and £10) to Berkshire:—

Miss J. Matthews (Instructress).

Mrs. A. K. Barnett. Mrs. S. E. Goodenough Mrs. L. Morris,
Mss E. Davidson Mrs. Taylor. Miss Young.

- Class 74.—Cream Cheese, made from pure Cream only. No Milk or Curd to be added (6 Cheeses)—First Prize (11) to Mrs. J. T. Garbutt. Second Prize (10s.) to The East Anghan Institute of Agriculture
- Class 75.— Unridened Soft Cheese, other than Cream Cheese. Made direct from Milk (4 Cheeses).—First Prize (£1) to F Webster. Second Prize (10s.) to Miss R. James

#### COLLECTION OF PRODUCE

Class 76—Open only to Women's Institutes. To consist of 2 lbs. Fresh Butter, 1 lb Cream (raw or scalded) and 2 dozen Eggs. The Collection to be packed in a box and sent to the Show by Paicel Post Packages taken into consideration when making awards.—First Prize (£5) to The Snape Women's Institute. Second Prize (£3) to The St. Weonards Women's Institute Third Prize (£2) to The Spexhall & Wissett Women's Institute.

#### BACON.

- Class 77.—Pale Dried (4 hamless sides, English Shoulder Belly, of Spring or Winter Cure) Weight of side not to exceed 50 lbs. --Frist Prize (£5) to Marsh & Baxter, Ltd.
- Class 78.—Pale Dried (4 hamless special cut sides of Spring or Winter Cure).—Weight of side not to exceed 45 lbs —First Prize (£5) to Marsh & Baxter, Ltd
- Class 79.—Smoked (4 sides, mild cured in Wiltshire style, with ham attached) First Prize (£5) to M. Venner & Sons, Ltd. Second Prize (£3) to M. Venner & Sons, Ltd.
- Class 80.—Pale Dried (4 sides, mild cured in Wiltshire style, with ham attached).
  —First Prize (£5) to M. Venner & Sons, Ltd. Second Prize (£3) to M. Venner & Sons, Ltd.
- Class 81.—Two Sides of Bacon Smoked, Two Sides of Bacon Pale Dried, Two Hams Smoked and Two Hams Pale Dried (the weight of the sides not less than 56 lbs, and not more than 68 lbs, each; the hams not less than 12 lbs, and not more than 20 lbs, each.)—First Prize (£7 7s.) to M. Venner & Sons, Ltd. Second Prize (£3 3s.) to M. Venner & Sons, Ltd. Third Prize (£2 2s.) to The Herts, and Beds. Bacon Factory.
- Class 82.—Bacon Pios (6 Pigs entered by their respective Breed Societies).— Prize (The "Whitley" Challenge ('up) to the Gloucestershire Old Spots Pig Society.
- Class 83.—Bacon Pigs, Pedigree (2 pigs entered by Breeders). --Prize (The "Beale" ('hallenge Cup) and the "Harris" ('hallenge Cup to Bennett & Howard (Gloucestershire Old Spots). *Second* Prize (£3) to Spencer, Son & Hancox (Large White). *Third* Prize (£2) to G. H. Eustice (Long White Lopeared).
- Class 84.—Bacon Pigs.—First Cross (2 pigs entered by Breeders).—First Prize (The "Bledisloe" Bacon Challenge Cup) to Lord Bledisloe, K.B.E. (Large White and Large Black). Second Prize (£3) to H. H. Pickford (Large White and Large Black). Third Prize (£2) to Major-Gen. R. L. Mullens, C.B. (Middle White and Large White).
- Class 85.—Colonial (4 sides). —No award.

#### HAMS.

- Class 86.—Pale Dried (4 hams, long cut, of Winter or Spring cure, not over 14 lbs. weight).—First Prize (£5) to W. H. Smart & Co., Ltd. Second Prize (£3) to Marsh & Baxter, Ltd.
- Class 87.—Pale Dried (4 hams, long cut, of Winter or Spring cure, over 14 lbs. weight).—First Prize (£5) to T. Foster. Second Prize (£3) to W. H. Smart & Co., Ltd.

- (Hass 88.—Smoked (4 hams, long cut, mild cured, not over 10 weeks cured, not over 15 lbs. weight).—First Prize (£5) to M. Venner & Sons, Ltd. Second Prize (£3) to Marsh & Baxter, Ltd.
- Class 89.—Pale Dried (4 hams, long cut, mild cured, not over 10 weeks cured, over 15 lbs. weight).—First Prize (£5) to Marsh & Baxter, Ltd. Second Prize (£3) to Rashers.
- Class 90.—ONE HAM (home cured). Open only to Members of Women's Institutes.

  —First Prize (£2) to Mrs. C. Hubbard, Second Prize (£1) to Mrs. L. A. Blake.
- Class 91.—()NE HAM (cured in the Farmhouse or Home; dealers and professional bacon curers not eligible).—First Prize (£2) to W. White & Sons. Second Prize (£1) to W. White & Sons,
- Class 92.—Selling Class (2 hams, any variety).—First Prize (£2) to T. Foster.

  Second Prize (£1) to T. Foster. Third Prize (10s.) to J. Johnson & Sons.

### BUTTER.

- Class 93.—SLIGHTLY SALTED. Open only to farmers, their wives, sons and daughters, occupying not exceeding 100 acres, and who have never won a prize in the Butter Classes at any of the Association's Shows; 2 lbs, in 1-lb. lumps (brick shape).—First Prize (£3) to Miss O. L. Hornby. Second Prize (£2) to Miss A. M. Ward. Third Prize (£1) to Mrs. F. M. Cosham. Fourth Prize (10s.) to Mrs. J. Mitchinson. Fifth Prize (5s.) to Mrs. P. Roach.
- Class 94.—Perfectly free from Salt (the produce of Channel Islands Cattle and their Crosses: 2 lbs. in 1-lb. lumps, brick shape).—First Prize (£3) to Mrs. L. Matthews. Second Prize (£2) to The Earl of Guilford. Third Prize (£1) to J. Pierpont Morgan. Fourth Prize (10s.) to Mrs. A. Underwood. Fifth Prize (5s.) to Mrs. J. H. Hearn.
- Class 95.—SLIGHTLY SALTED (the produce of Channel Islands Cattle and their Crosses; 2 lbs. in 1-lb. lumps, brick shape).—First Prize (£3) to J. Pierpont Morgan. Second Prize (£2) to Miss A. Feby. Third Prize (£1) to Miss L. T. Hare. Fourth Prize (10s.) to Mrs. L. Matthews. Fifth Prize (5s.) to The Earl of Guilford.
- Class 96.—Perfectly Free from Salt (the produce of Shorthorn and other Cattle and their Crosses, except Channel Islands and their Crosses; 2 lbs. in 1-lb lumps, brick shape). First Prize (£3) and the "Lord Mayor's" Champion Cup to Mrs. L. R. Mildon. Second Prize (£2) to Mrs. W. Turnill. Third Prize (£1) to Mrs. J. H. Hearn. Fourth Prize (10s). to Mrs. G. Blackler. Fifth Prize (5s.) to Miss A. M. Ward.
- Class 97.—SLIGHTLY SALTED (the produce of Shorthorn and other Cattle and their Crosses, except Channel Islands and their Crosses; 2 lbs. in 1-lb. lumps, brick shape).—First Prize (£3) to Mrs. J. T. Garbutt. Second Prize (£2) to Mrs. G. Blackler. Third Prize (£1) to Mrs. J. H. Hearn. Fourth Prize (10s.) to Mrs. J. Yeo. Fifth Prize (5s.) to Mrs. Heywood.
- Class 98.—Free from Salt or Slightly Salted, at the discretion of the Exhibitor, to be made from Scalded Cream only (2 lbs. in 1-lb. lumps, brick shape).—
  First Prize (£3) to Mrs. L. Matthews. Second Prize (£2) to Miss A. Feby.
  Third Prize (£1) to Mrs. W. Irving. Fourth Prize (10s.) to Mrs. J. H. Hearn.
  Fifth Prize (5s.) to Mrs. J. Yeo.
- Class 99.—SLIGHTLY SALTED, in boxes of 12 bricks of 1-lb. each.—First Prize (£3) to The Macamore Co-operative Creamery, Ltd. Second Prize (£2) to The Kilkenny Co-operative Creamery, Ltd. Third Prize (£1) to The Glenvilliam Co-operative Dairy Society, Ltd. Fourth Prize (10s.) to The Herbertstown Co-operative Agricultural and Dairy Society, Ltd.
- Class 100.—Free from Salt (24-lb. boxes of 12 rolls.)—First Prize (£3) to The Shanagolden Co-operative Dairy Society, Ltd. Second Prize (£2) to The Herbertstown Co-operative Agricultural & Dairy Society, Ltd. Third Prize (£1) to The Dromkeen Co-operative Agricultural & Dairy Society, Ltd.

- Class 101.—Mild Cured (Slightly Salted in 24 lb. boxes of 24 rolls).—First Prize (£3) to The Kilkenny Co-operative Creamery, Ltd. Second Prize (£2) to The Shanagolden Co-operative Dairy Society, Ltd. Therd Prize (£1) to The Herbertstown Co-operative Agricultural & Dairy Society, Ltd. Fourth Prize (10s.) to The Dromkeen Co-operative Agricultural & Dairy Society, Ltd.
- Class 102.—CURED (Slightly Salted, 28 lbs.).—First Prize (£3) to The Glenwilliam Co-operative Dairy Society, Ltd. Necond Prize (£2) to The Gilkenny Co-operative Creamery, Ltd. Third Prize (£1) to The Ballyrashane Co-operative Agricultural & Dairy Society, Ltd. Fourth Prize (10s.) to The Dromkeen Co-operative Agricultural & Dairy Society, Ltd.
- Class 103.—Cured (56 lbs.).—First Prize (£3) to The Kilkenny Co-operative Creamery, Ltd. Second Prize (£2) to The Dromkeen Co-operative Agricultural & Dairy Society, Ltd. Third Prize (£1) to The Ballyrashane Co-operative Agricultural & Dairy Society, Ltd. Fourth Prize (10s.) to the Macamore Co-operative Creamery, Ltd.
- Class 104.—Two Pounds, made up in the most attractive form in Bricks, Rolls or Pats for table use—First Prize (£3) to Miss E. Challenger. Second Prize (£2) to Mrs. C. Blackler. Third Prize (£1) to C. Monk.
- Class 105.—Fancy or Ornamental Design (with Foliage or other extraneous Decoration).—First Prize (£3) to Miss H. M. Trenchard. Second Prize (£2) to Miss P. L. Mudd. Third Prize (£1) to Miss E. Bush.

### COLONIAL BUTTER.

- Class 106.—Salted (one box containing not less than 56 lbs.).—First Prize (Gold Medal) to P. Burns & Co., Ltd. Second Prize (Silver Medal) to M. Jensen. Third Prize (Bronze Medal) to J. L. Burrows.
- Class 107.—UNSALTED (one box containing not less than 56 lbs.).—First Prize (Gold Medal) to The Saskatchewan Co-operative Creamery, Ltd. Second Prize (Silver Medal) to The Queensland Farmers' Co-operative Co., Ltd. Third Prize (Bronze Medal) to The Singleton Central Co-operative Dairy Co., Ltd.

### COLLECTION OF COLONIAL DAIRY PRODUCE.

Class 108.—To include Bacon, Deed Poultry and Eggs.—Prize (Gold Medal) to The Commonwealth of Australia.

### CREAM.

- Class 109.—CLOTTED.—First Prize (£2 2s. and Silver Medal) to Mrs. E. A. Tinney. Second Prize (£1 1s. and Bronza Medal) to W. R. Beer.
- Class 110.—Other than Clottell,—First Prize (£2 2s. and Silver Medal) to Major F. P. P. Soper. Second Prize (£1 1s. and Brouze Medal) to Miss M. E. Hampton.

### BOTTLED FRUIT, VEGETABLES, AND JAMS.

- Class 111.—Six Bottles of Sour Fruit, of not less than 4 Varieties (Rhubarb admitted).—Cancelled.
- Class 112.—Six Bottles of Story Fruit, of not less than 4 Varieties (Apples and Pears admitted).—Cancelled.
- Class 113.—Three Bottles of Sout Fruit, distinct.—First Prize (£1) and Silver Medal to Mrs. C. J. Wintoux. Second Prize (10s.) to Mrs. Turney. Third Prize (7s. 6d.) to The Cathedral Dairy.
- Class 114.—Three Bottles of Stone Fruit, distinct.—First Prize (£1) to Miss F. R. Wilkinson. Second Prize (10s.) to Mrs. Turney. Third Prize (7s. 6d.) to Mrs. C. J. Wintour.

- Class 115.—Three Bottles of Stone on Soft Fruit, distinct, preserved in Syrup. First Prize (£1) to Mrs. K. Dalton. Second Prize (10s.) to Mrs. C. J. Wintour. Third Prize (7s. 6d.) to Miss V. M. Lyddon
- Class 116.—Six Bottles of Vegetables, of not less than 4 Varieties (Tomatoes admitted).—First Prize (£2) to Mrs. C. J. Wintour. Second Prize (£1) to Mrs. E. Caddick.
- Class 117.—Three Bottles of Vegetables, distinct.—Cancelled.
- Class 118.—Three Jars of Jam (1-lb. each, dissimilar, any Variety).—First Prize (£1) to Mrs. C. J. Wintour Second Prize (10s.) to The Cathedral Dairy. Third Prize (7s. 6d.) to Miss M. E. Shuter.
- Class 119.—Combined Exhibit of Bottled Fruits, Vegetables, Jams, Fruit Jellies, Pickles and Chutneys, open only to Women's Institutes. To consist of 3 bottles of Soft Fruit, 3 bottles of Stone Fruit, 3 bottles of Vegetables, 3 1-lb, jars of Jam or Fruit Jelly, 3 jars of Pickles or Chutney, All exhibits to be shown in glass containers and to be of not less than two varieties—First Prize (£5) to The St. Weonard's Women's Institute. Second Prize (£3) to The Loose Women's Institute. Third Prize (£2) to The Snape Women's Institute.

### HONEY, WAX, &c.

- Class 120 Six Jars of Light-Coloured Extracted Honey (1 lb. each approximate weight).—First Prize (£1) to J. S. Leigh, Second Prize (15s.) to C. H. Barber, Third Prize (12s. 6d.) to A. J. Harris, Fourth Prize (10s.) to A. H. Smith.
- Class 121.—Six Jars of Medium-Coloured Entracted Honey, other than Heather Honey (1 lb. each approximate weight).—First Prize (£1) to F. Humphreys. Second Prize (15s.) to D. J. Griffiths. Third Prize (12s. 6d.) to Miss A. B. Flower. Fourth Prize (10s.) to Miss E. Challenger.
- Class 122.—Six Jars of Dark Coloured Extracted Honey, including any Variety of Heather Mixture (1 lb. each approximate weight).—First Prize (£1) to W. J. Goodrich. Second Prize (15s.) to Mrs. B J. Pond. Third Prize (10s.) to F. Humphreys.
- Class 123.—Six Jars of Granulateo Honey, of 1924 or any previous year (1 lb. each approximate weight).—First Prize (£1) to A. H. Smith. Second Prize (10s), to W. J. Goodrich. Third Prize (7s. 6d.) to E. C. R. White.
- Class 124. --Six Sections of Honey, other than Heather (size 41 by 41, 14b, each approximate weight). --First Prize (£1) to Mrs. B. J. Pond. Second Prize (15s.) to J. E. Swaffield. Third Prize (10s.) to W. S. Halford.
- Class 125.— DISPLAY OF COMB AND EXTRACTED HONEY, of any year (approximately 100 lbs. in weight, shown on a space of 3 ft. 6 in. by 3 ft. 6 in.).—First Prize (£5) to G. A. Taylor. Second Prize (£2) to F. Humphreys.
- Class 126.—Wax (not less than 2 lbs. in 2 cakes only; the produce of the Exhibitor's Apiary; extracted and cleaned by the Exhibitor or his Assistants).—First Prize (15s.) to E. C. R. White. Second Prize (10s.) to Miss A. B. Flower.
- Class 127.—Wax (not less than 3 lbs.; the produce of the Exhibitor's Apiary; extracted and cleaned by the Exhibitor or his Assistants; to be shown in shape, quality and package suitable for the retail trade).—First Prize (15s.) to Mrs. I. Scott. Second Prize (10s.) to F. Humphreys.
- Class 128.—Interesting and Instructive Exhibit of a Practical on Scientific Nature, connected with Bee Culture, not mentioned in the foregoing Classes.—First Prize (15s.) to G. A. Taylor, for "The Development of the Hive Bee from the Egg to the Perfect Insect."
- Class 129.—Three Vessels of Colonial Extracted Honey, as imported.— First Prize (Silver Medal) to The Ontario Beekeepers' Association. Second Prize (Bronze Medal) to The Ontario Beekeepers' Association.

### ROOTS

- Class 130.—Six Specimens of Globe Mangolds, drawn from a crop of not less than two acres.—First Prize (£3) to D Thomas —Second Prize (£2) to J James. Third Prize (£1) to H. F. Read.
- Class 131.—Six Specimens of Golden Tankard Mangolds, Yellow Fleshed, drawn from a crop of not less than two acres.—First Prize (£3) to W. Watts. Second Prize (£2) to R. Thomas. Third Prize (£1) to T. Chettle.
- Class 132.—Six Specimens of Intermediate Mangolds, drawn from a crop of not less than two acres.—First Prize (£3) to J. James. Second Prize (£2) to Broughton & Son. Third Prize (£1) to H. G. Bennett
- Class 133.—Six Specimens of Swedes, Purple Top, drawn from a crop of not less than two acres.—First Prize (£3) to J. A. Whittle. Necond Prize (£2) to R. E. Baty. Third Prize (£1) to J. H. Hedley.
- Class 134.—Six Specimens of Swedfs, Bronze Top, drawn from a crop of not less than two acres.—First Prize (£3) to W. Watts. Second Prize (£2) to P. Walker, Third Prize (£1) to W. Davidson.
- (Class 135.—Six Specimens of Swedes, Green Top, drawn from a crop of not less than two acres.—First Prize (£3) to J. James. Second Prize (£2) to W. Davidson. Third Prize (£1) to R. Thomas.
- Class 136.—Six Specimens of Turnips, any one Variety, drawn from a crop of not less than two acres—First Prize (£3) to J. Meikle.—Second Prize (£2) to R. Paterson.—Third Prize (£1) to T. W. Turnbull.
- (Class 137.—Three Specimens of Cabbage, drawn from a crop of not less than two acres.—First Prize (£3) to F. S. Mee. Second Prize (£2) to J. A. Wright. Third Prize (£1) to B. Wright.
- Class 138.—Six Specimens of Kohl-Rabi, drawn from a crop of not less than two acres.—First Prize (£3) to P. Perry. Second Prize (£2) to T. Chettle. Third Prize (£1) to A. Steel
- Class 139.—Six Specimens of Kale, Marrow Stem, drawn from a crop of not less than two acres.—First Prize (£3) to J. A. Wright. Second Prize (£2) to T. Thorns. Third Prize (£1) to A. J. P. Isaac.
- Class 140.—Collection of Roots, &c., for Cattle-feeding in Winter. To consist of six specimens of not exceeding ten Varieties in as many distinct Types as possible.—First Prize (£5) to W. Watts. Second Prize (£3) to P. Perry. Third Prize (£2) to J. James.

### INVENTIONS.

- Class 141.—Any New Apparatus or Invention relating to the Dairy Industry, or one showing Distinct and Practical Improvement Especially as to Saving Labour, not eligible for competition in any other Class, and not previously exhibited in competition at the Dairy Show.—Silver Medal to The Dairy Supply Co., Ltd., for Glass-Imed Pasteuriser, Type "J"; The Dairy Supply Co., Ltd., for "Goliath" (U.S.) Heavy Duty Ice Cream Freezer. Bronze Medal to G. W. King, Ltd., for "Louden King," Individual Automatic Drinking Bowl; The De Laval Chadburn Co., Ltd., for "Alfa Laval" Milking Machine; G. S. Clayton for Filling Machine.
- Class 142.—A TIE OR OTHER APPLIANCE for securing a Cow in its Stall, allowing reasonable movement and facility of release in case of emergency. Cost to be taken into consideration.—First Prize (£3 and Silver Medal) to G. W. King, Ltd. Second Prize (£2 and Bronze Medal) to Beatty Bros., Ltd.
- Class 143.—Small ICE CREAM EQUIPMENT to deal with one to three gallons per hour, suitable for the use of Tenant Farmers and other small producers.—No award.

### JUNKET-MAKING CONTESTS

Class 144. JUNKET MADE WITH MILK AND CREAM.

SECTION A. First Prize (£2) to Miss K. Rogers. Second Prize (£1)

to Miss M. C. Wakcham. Third Prize (10s.) to Mrs. M. Poolev.

SECTION B.--First Prize (£2) to Miss B. F. Pascoe, Second Prize (£1) to Miss E. J. Edwards. Third Prize (10s.) to Miss K. Davis.

SECTION C.—First Prize (£2) to Miss E. Challenger. Second Prize (£1) to Miss M. H. Edwards. Third Prize (10s.) to Mrs. R. J. Dunstan.

Class 145.—Champion Contest.—Prize (Silver Medal) to Miss M. Rounswell.

### BUTTER-MAKING CONTESTS.

Class 146.—Open to those who have never won a Prize at any Show wherever held. SECTION A.—First Prize (£3) to Miss B. Laity. Second Prize (£2) to Miss E. Challenger. Third Prize (£1) to Miss B. F. Pascoe.

SECTION B.—First Prize (£3) to Miss V. E. Jones, Second Prize (£2)

to Miss H. Morgan. Third Prize (£1) to Miss P. M. Marriott. SECTION C.—First Prize (£3) to Miss N. Davies-Cooke. Second Prize (£2) to Miss C. Morgan. Third Prize (£1) Miss D. D. Pascoe.

Class 147.—Open to Students who have attended Classes at the British Dairy Institute, Reading, for not less than one month during the past two years. -First Prize (£3) to Miss M. A. Cautley. Second Prize (£2) to Miss B. Russell-Smith. Third Prize (£1) to Miss M. E. Todd.

Class 148.—Open Contest for Men and Women.

SECTION A.—First Prize (£3) to Miss M. E. Thomas. Second Prize (£2) to

Mrs. M. Watson. Third Prize (£1) to Miss B. J. Mudd. Section B.—First Prize (£3) to Miss F. Scott. Second Prize (£2) to Miss R. E. Mitchell. Third Prize (£1) to Miss L. Tombs.

SECTION C.—First Prize (£3) to Miss F. Jones. Second Prize (£2) to

Miss E. J. Edwards. Third Prize (£1) to Miss N. B. Mitchell.

SECTION D.—First Prize (£3) to Miss B. F. Pascoe. Second Prize (£2) to Miss O. J. Robison. Third Prize (£1) to Miss M. J. Harris.

Section E.—First Prize (£3) to Miss M. Rounswell. Second Prize (£2)

to Mrs. A. Morgan. Third Prize (£1) to Miss S. Davies.

Class 149.—Open to First Prize Dairy Show Winners of 1925.—First Prize (£3 and Silver Medal) to Miss F. Jones. Second Prize (£2) to Miss B. F. Pascoe. Third Prize (£1) to Miss B. Laitv.

Class 150.— Champion Contest (open to Winners of First Prizes in the preceding Classes or at any Shows of the British Dairy Farmers' Association, Champions of any year excepted).—First Prize (Gold Medal) to Miss M. E. Thomas. Second Prize (£3) to Miss J. James. Third Prize (£2) to Miss J. Prichard.

### MILKERS' CONTESTS.

Class 151.—Open to Men and Women of 18 years and over.—Equal First Prizes (£5 10s, each) to Miss E. Bebbington and T. M. Kent. Third Prize (£3) to Miss E. E. Potts. Fourth Prize (£2) to J. Marking. Equal Fifth Prizes (£1 each) to R. D. Hughes and A. Logan.

Class 152.—Open to Boys and Girls under 18 years.—First Prize (£7) to Miss D. Lloyd. Second Prize (£4) to ('. W. Hobson. Third Prize (£3) to N. Jones. Fourth Prize (£2) to R. A. Newton. Fifth Prize (£1) to F. W. Curtis.

Class 153.—Champion Contest (open to First Prize Winners in preceding Classes or at the Shows of 1922, 1923, and 1924, of The British Dairy Farmers' Association, Champions of any year excepted).—Prize (Gold Medal and £2) to Miss E. Bebbington.

### COW-JUDGING CONTEST.

Class 154.—Open to Teams of Students from Agricultural Colleges, Farm Institutes, and County Council Classes.—Prize (B.D.F.A. Challenge Bowl) to The East Anglian Institute of Agriculture, Chelmsford, and Bronze Medal to W. M. Haddon, Miss O. J. Robison and G. M. Wooldridge.

### THE OBJECTS OF THE ASSOCIATION

are the improvement of

DAIRY STOCK AND DAIRY PRODUCE.

by encouraging the Breeding and Rearing of Stock for the special purpose of the Dairy; a larger and better production of Milk, Butter, Cheese, and Eggs; the Erection of Improved Dairy Buildings, and the Invention of New or Improved Dairy Utensils, Machinery, Implements, and Scientific Appliances. The Association also stimulates the Breeding and Rearing of Poultry, &c. By means of Papers in the Society's Journal (published annually), Annual Conferences in different dairy districts, Lectures, and Discussions, and in other ways, efforts are continually being made to disseminate a more thorough knowledge of Dairy husbandry. Moreover, prompt action is taken by the Association for the protection of the interests of Dairy Farmers in the event of their being threatened by legislation or by Departmental Orders.

Prizes to the value of about £3.500 are annually offered for competition at the Dairy Show, held at the Royal Agricultural Hall, Islington, London.

It is difficult to over-estimate the importance and need of greater attention being paid to the Dairy industry. It is admitted that by improved modes of managing Milk and its products, the wealth obtained from the Milch Cows of the country could be increased most materially. The Council, therefore, appeal to Agriculturists of all classes, and Dairy Farmers in particular, to become Members of the Association, and practically aid in developing its usefulness.

The advantages of Membership comprise:—

- I.—A free pass to all the Society's Dairy Shows, available each day during the Exhibition, with the privilege of admitting free (by ticket) a friend on any one day.
- 2.—The privilege of participating, at specially low charges, in the Dairy Conferences at home or abroad, organised by the Association.
- 3.—The Exhibition of Live Stock, Dairy Produce, and Utensils, at a reduced scale of fees to those whose subscriptions for the past year and current year are paid.
- 4.—A copy (free by post) of the *Journal* of the Association, published annually.
- 5.—Analysis of one sample of a dairy product free of charge (Paras. 1—9); and subsequent analyses by the Consulting Chemist, at low fees, of samples of milk, cream, butter, cheese, feeding stuffs, water, soil, manures, &c., and advice on dairy matters connected with his Department.

- 6.—Bacteriological examination of dairy produce, &c, at reduced fees.
- Examination by the Consulting Pathological Bacteriologist, for particular pathogenic or disease-producing organisms.
- 8—Protessional advice and assistance at a reduced scale of charges, in any case of disease among the live stock of the farm
- 9.—In any case of hardship due to administration of legal or other regulations, Members are recommended to send details of such case at once to the Secretary Advice and assistance will be given by the Association upon the recommendation of the Committee appointed to deal with such matters.

The Annual Subscription is fi, but Dairy Instructors and Students are admitted on payment of ros. 6d. per annum. The latter sum entitles Dairy Instructors to all privileges, except the reduced fees for exhibition at the Shows

### Members' Chemical Privileges.

Free Analysis.—Each member, whose subscription for the current year is paid, is entitled to one analysis of a dairy product (paragraphs I to 9 below) free of charge A stamped addressed envelope must be forwarded with the sample for the return of the report of the analysis.

Further analyses will be made by the Association's Consulting Chemist at the following reduced fees:—

I.—MILK (Fresh).		£,	s.	d.
Estimation of Fat and Total Solids		ŏ	I	0
Estimation of Fat, Casein, Albumen, Sugar, and Ash	• • •	0	10	0
2.—MILK (Sour).				
Estimation of Fat and Total Solids	•••	О	5	0
3.—SKIMMED MILK.				
Estimation of Fat and Total Solids	•••	О	5	0
4.—CONDENSED MILK.				
Estimation of Fat		0	5	0
Estimation of Fat, Casein, and Solids	• • •	О	OJ	0
Estimation of Cane Sugar (extra)	• • •	O	5	O
5.—HUMANISED MILK.				
Complete Analysis		1	r	0
o.—CREAM.				
Estimation of Fat		0	5	0
Estimation of Fat, Casein, and Solids			12	6
Examination for Foreign Fats (extra)		0	10	6
7.—BUTTER.				
Estimation of Water, Fat, Casein, and Ash		o	01	0
Examination for Foreign Fats (extra)		0	10	6
8.—CHEESE.				
Estimation of Water, Fat, Casein, and Ash		0	TO	6
Examination for Foreign Fats (extra)		o		o
9.—RENNET.		_	~	_
Examination of Strength	•••	0	5	О

IO.—CAKES AND MEALS.  Estimation of Oil only Estimation of Oil, Albuminoids, Carbo-hydrates, &c	0	5	d. o o
II.—GRASS, SILAGE, ROOTS, &c. Estimation of Oil, Albuminoids, Carbo-hydrates, &c	1	10	О
12.—MANURES  Estimation of Soluble Phosphoric Acid  Estimation of Soluble and Însoluble Phosphoric Acid  Estimation of Citric Soluble Phosphoric Acid  Estimation of Nitrogen	0	7 5	0 6 6 0 6
I 3.—SOIL.  Estimation of Lime			
14.—WATER. Analysis for Drmking or Dairy Purposes	ı	1	o
15.—POISONS.  Examination of a Substance for Mineral Poisons  Examination for Organic Poisons (Alkaloids, &c.)		2	0
16.—CIDER AND FERMENTED DRINKS.  Estimation of Alcohol Estimation of Alcohol, Sugar, Acidity, &c		7 15	6
17.—PRESERVATIVES.  Examining a Substance for Boracic Acid or Salicylic Acid, &c., for each Substance sought Estimation of the quantity of Boracic Acid		2 IO	-
18.—CONSULTATION.  For Letter in reply to Enquiry  For Report on a Subject  For Personal Interview  For Special Consultation	0	Fre	6 6
Note.—The Consulting Chemist will be prepared to quote terms to members requiring a number of analyses at fi			

Instructions for Taking Fair Samples for Analysis.

intervals.

Dairy Produce.—Milk should be sent in a well-corked 8-oz. clear bottle. The milk should quite fill the bottle. Butter or cheese, about 8 ounces; the former in a gallipot well tied down.

Soils.—A block of soil about four or five inches square, and nine inches deep, should be sent in a strong box by rail.

Artificial Manures.—Take a handful of manure out of at least half a dozen bags, mix these rapidly and thoroughly, breaking down all lumps. Forward about a pound of the mixture in a tin box, and retain the remainder. Samples of manure should be sent immediately after the delivery of the bulk, and before settling the account. All manures should be bought subject to analysis.

Feeding Materials.—Feeding cakes, meals, or grains: about a pound should be sent in a bag or box. Grass and hay: a bundle of a few pounds weight. Silage: a six-inch cubic block, packed closely in a box to keep it compressed.

Waters.—A Winchester quart glass-stoppered bottle should be procured from a druggist, well washed out with the water, then completely filled, the stopper tied securely down, and the bottle packed in a box and sent by rail.

N.B.—In order to prevent disappointment, the Chemist requests that, as far as possible, Members desiring to hold a personal consultation should make an appointment by letter. Between 10 and 4 are the hours most convenient. The fees for analyses of artificial manures and feeding stuffs are only applicable to Members who are not commercially engaged in their manufacture or sale. All communications intended for the Analytical and Consulting Chemist must be addressed direct to Dr. T. J. Drakeley, Ph.D., M.Sc., F.I.C., F.C.S., M.I.M.E., 28, Russell Square, London, W.C.I.

### Members' Bacteriological Privileges.

Samples of dairy produce, &c., submitted for a bacteriological count, or for examination for Bacillus Coli, &c., should be forwarded to Dr. T. J. Drakeley, Ph.D., M.Sc. F.I.C., F.C.S., M.I.M.E., 28, Russell Square, W.C. I.

Examinations will be made at the following fees:-

MILK.	£.	5.	đ.
Bacteriological Examination of "Certified," "Grade A," or			
"Pasteurised" Milk under the Milk (Special Designations)			
Order, 1922	0	10	6
Cultural Examination for a particular organism	2	2	0
CREAM, BUTTER, CHEESE.			
Cultural Examination for a particular organism	2	2	0

### Directions for Sending Samples.

Samples of milk (one pint) and cream (half pint) should be forwarded in wide-mouthed stoppered bottles which have previously been thoroughly cleaned, and then rinsed several times with very hot, almost boiling, water.

Butter is best sent in a  $\frac{1}{2}$ -lb brick or roll, just as it was made up, wrapped in grease-proof paper, and packed in a box.

If the *Cheese* is small, send a whole one; otherwise forward a square block of not less than one pound, and not a wedge-shaped piece. Wrap in grease-proof paper and pack in a box.

All samples should be sent by the speediest method possible. They ought not to arrive either on Saturday or Sunday.

### Examinations for Pathogenic Organisms.

Samples to be examined for disease-producing organisms should be forwarded to Dr. Andrewes, Pathological Laboratory, St. Bartholomew's Hospital, London, E.C. 1. Members are requested to note that in the case of examination for the tubercle bacillus the method of animal inoculation, which experience has shown to be the only reliable one, will be alone used. It is impossible to carry out the process of sedimentation necessary for the detection of tubercle bacillus in milk which is received in a curdled condition. The report cannot be sent for a period of four to six weeks from the time the sample is received, but in the case of other pathogenic organisms the time required is much shorter.

### EXAMINATIONS BY DR. ANDREWES, Pathological Laboratory, St. Bartholomew's Hospital, London, E.C. 1.

MILK.	£	s.	d.
Cultural and experimental examination for a particular pathogenic organism	2	2	0
PASTEURISED OR STERILISED MILK. Cultural and experimental examination for a particular pathogenic organism	1	ı	0
CREAM, BUTTER OR CHEESE.  Cultural and experimental examination for a particular pathogenic organism	2	2	0
WATER.  Cultural and experimental examination for a particular pathogenic organism	2	2	0

### Members' Veterinary Privileges.

Members of the Association who require professional assistance in any case of disease among their animals must apply direct to the Consulting Veterinary Surgeon, Professor G. H. WOOLDRIDGE, Royal Veterinary College, Camden Town, London, N.W. I, whose scale of charges is as follows:—

		£	s.	d.
Personal Consultation	•••	0	10	6
Post-mortem Examination and Report		0	10	6
Consultation by Letter	•••	0	5	o
Visit and Report, in case of an outbreak of disease, in addition	to			
personal and travelling expenses, per day	•••	2	2	0

### Members' Botanical Privileges.

The Council have fixed the following rates of charge for the examination of Plants and Seeds for the bona fide and individual use and information of Members of the Association (not being Seedsmen), who are particularly requested to mention the kind of examination they require, and to quote its number in the subjoined Schedule.

No.	£	s.	đ,
I.—A Report on the purity, and amount or nature of foreign materials, of a sample of seed	О	I	0
2.—A Report on the perfectness and germinating power of a sample			
of seed	0	1	0
Nos. 1 and 2 together	o	1	6
3 Determination of the species of any weed or other plant, or of any epiphyte or vegetable parasite, with a report on its habits, and the means for its extermination or prevention	0	I	o
4.—Report on any disease affecting farm crops	0	1	o
5.—Determination of the species of a collection of natural grasses found in any district, with a report on their habits and pasture value	0	4	0

### Instructions for Selecting and Sending Samples.

The utmost care must be taken to secure a fair honest sample. When possible, at least one ounce of grass and other small seeds should be sent, and two ounces of cereals or larger seeds. Grass seeds should be sent at least four weeks, and clover seeds two weeks before they are to be used. In collecting specimens of plants, the whole plant should be taken up, and the earth shaken from the roots. If possible, the plant must be in flower or fruit. They should be packed in a light box, or in a firm paper parcel. Specimens of diseased plants or of parasites should be forwarded as fresh as possible—either in a bottle, or packed in tinfoil or oil silk. All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstance (soil, situation, &c.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

The charge for examination must be paid, in Postage Stamps or otherwise, at the time of application, and the carriage of all parcels must be prepaid. It must be distinctly understood that no notice can be taken of any application unless it is accompanied by the proper fee.

### THE BRITISH DAIRY INSTITUTE, READING.

THE British Dairy Institute was established at Aylesbury in 1888, by the British Dairy Farmers' Association, and several hundred Students were successfully trained there in different branches of dairy work. In order that Students might have an opportunity of combining with the practical study of dairying a more complete scientific instruction, the Institute was, in 1896, moved to Reading, and placed under the management of a Committee representing the British Dairy Farmers' Association and the University College, Reading.

The Institute contains large milk-receiving, butter-making, and milk-testing rooms; rooms for the manufacture of pressed, unpressed, and soft cheeses; and rooms for the ripening and drying of different varieties of cheese; besides reading, lecture, and common rooms. It is equipped with the best modern apparatus for the manufacture of dairy produce, including power-driven separating and buttermaking

plant, and cold storage plant.

The instruction given is both practical and theoretical, and is arranged to suit the requirements of those who need either elementary or advanced dairy instruction, or who wish to perfect themselves in the manufacture of any special variety of dairy produce. Instruction is provided for students who wish to specialize in Bacteriology or Chemistry applied to dairying.

The Institute is open throughout the year, except during the Winter Vacation of eight weeks, which commences about the middle

of November.

The Courses at the Institute are open to men and women above the age of 16 years. Students may join at any time while the Institute is open, and for any period not less than a week, but those who desire to take a thorough short course in buttermaking or cheesemaking are recommended to attend the Six Months' or Three Months' Joint Course in Dairying.

The manufacture of hard-pressed and soft cheeses is taught during the whole of the time when the Institute is open, but Stilton and other

blue-veined varieties are not made until May.

Instruction is given in buttermaking, clotted-cream making, the testing and analysis of milk, the management of various types of separators, the handling and care of milk, and the preparation of starters, &c. Lectures and demonstrations are usually given in the afternoons, the mornings being chiefly devoted to practical dairy work.

Practical and theoretical instruction in buttermaking and cheese-making (including hard-pressed, blue-veined, and soft cheese),  $\pounds$ r per

week; £ 10 for three months; £ 18 for six months.

Practical and theoretical instruction in buttermaking only, ros. per week (or part of week).

A full Prospectus will be sent on application to the Secretary, British Dairy Institute, Reading.

B. RAVENSCROFT, Secretary, B.D.F.A. Fiftieth Half-yearly Report of the Council presented to the Members at the Meeting held at the Dairy Show, Royal Agricultural Hall, Islington, London, N.1, on Wednesday, October 21st, 1925.

Entries for the 1925 Dairy Show are again high—indeed, the Cattle entries have exceeded expectations, as it was thought that the qualifying milk yield would have materially reduced last year's entry.

The Council has given consideration to the question of admitting only cows that do not react to the Tuberculin Test, but the Council came to the conclusion that the time was not opportune.

The membership of the Association is steadily increasing, and with a view to its further stimulation the Council this year erected a pavilion at the Royal Chester Show and at the Lewes Show. At the former, refreshment was obtainable, and those who availed themselves of the facilities expressed keen appreciation of the venture

This year the Association is to have its own Stand at its own Show—taking the view that if Members cannot be secured at a Dairy Show little can be expected from other Shows. Thus, all are asked to visit the Association's Stand, Number 102, in the Main Hall. Make your appointments there—and bring your friends.

After a careful survey of the Association's financial position the Council voted, in February last, the further sum of One Thousand Pounds to the National Institute for Research in Dairying. The Annual Conference was held in Somersetshire, Gloucestershire, and Wiltshire, with Bristol as a centre, and those who were with the party will long remember the generous hospitality shown and the memorable rides taken through the most delectable parts of these famous counties.

Major J. A. Morrison has again kindly consented to allow his name to go forward for re-election as President, and in support of his nomination your vote will shortly be asked.

The following list of Vice-Presidents has been prepared, for which your approval will be asked:—

The Marquis of Crewe, K.G., Crewe Hall, Crewe.

Earl of Dartmouth, P.C., Patshull, Wolverhampton.

Viscount Elveden, C.B., M.P., 11, St. James's Square, London, S.W.1.

Lord Kenyon, Gredington, Whitchurch, Salop.

Lord Strachie, Sutton Court, Pensford, Bristol.

Major Lord O'Hagan, 16, Eaton Square, London, S.W. 1.

Lord Desborough, K.C.V.O., Taplow Court, Taplow, Bucks.

Lord Bledisloe, K.B.E., Lydney Park, Glos.

Sir Gilbert Greenall, Bart, C.V.O., Walton Hall, Warrington.

S. Palgrave Page, J.P., 27, Oakwood Court, W. 14.

G. Titus Barham, Sudbury Park, Wembley, Middlesex.

S. R. Whitley, J.P., Rookwood, Shinfield, Reading.

In accordance with the Articles of Association the following members of Council retire this year:—

W. Ashcroft, Surrey.

W. S. Brocklehurst, Bedfordshire.

William Burkitt, Durham.

Jesse Crumpler, Somerset.

Mrs. Jervoise, Hampshire.

Capt. R. Oliver-Bellasis, Warwickshire.

Sir Sidney J. Pocock, J.P., Surrey.

Robert Shanks, Sussex.

Miss J. Stubbs, Lancashire.

E. P. F. Sutton, Berkshire.

E. G. F. Walker, Somersetshire.

Dr. R. Stenhouse Williams, Berkshire.

With the exception of Mr. William Ashcroft and Sir Sidney J. Pocock all are seeking re-election. The loss of Mr. Ashcroft, through failing health, will be severely felt, and by his retirement the Council and the Education Committee lose one of its most valued Members. He joined the Association in 1882, and was elected to the Council in 1884.

Sir Sidney Pocock has been associated with the Council since 1898, and in those days was a most strenuous supporter. In more recent times he has been much occupied in business engagements, and feeling that he is unable to attend the Meetings as frequently as he would wish, considers it his duty to retire.

The following Members, having been duly proposed and seconded, seek election on the Council:—

Lord Lewisham (Dairy Farmer), Godmersham Park, Canterbury, proposed by S. R. Whitley, seconded by James Mackintosh.

R. Fletcher Hearnshaw (Farmer), Fox Hill, Burton Joyce, Notts, proposed by S. Palgrave Page, seconded by Colonel Caddick.

W. H. Hobson (Farmer), Woodhey Hall, Nantwich, proposed by G. H. Proudlove, seconded by Percy Smith.

Mrs. Martha Reeves, Knapp House, Clevedon, Somerset, proposed by G. Titus Barham, seconded by R. C. Assheton.

William Rice (Secretary, Poultry Club), 3, Ludgate Broadway, E.C., proposed by C. N. Goode, seconded by Charles E. Brooke.

The following Resolutions have been passed:—

June 10th, 1925.

"That the Ministry of Agriculture instruct the Railway Companies to disinfect all Trucks used for the conveyance of Live Stock in a much more drastic and efficient manner immediately after the removal of such stock, and that at least once a month all Cattle trucks shall be disinfected in such a manner."

September 16th, 1925.

"That it is desirable to hold the World's Dairy Congress in 1928."

Mr. Herbert J. Page will be proposed for re-election as the Association's Official Auditor, with Messrs. P. Hay, H. E. Hughes and W. E. Manchester, as Hon. Auditors.

By Order of the Council,

B. RAVENSCROFT,

Secretary,

28, Russell Square, London, W.C. 1. October, 1925.

### FIFTIETH ANNUAL REPORT OF THE COUNCIL

TO THE

GENERAL MEETING OF MEMBERS, FOR THE YEAR ENDING 31st DECEMBER, 1925.

Wednesday, March 3rd, 1926.

In presenting this fiftieth Annual Report it is pleasing to be able to record a healthy financial situation. The Invested Funds of the Association total £13,335, and although the excess of Income over Expenditure for the past year is but £792, it should be borne in mind that a donation of £1,000 has been made to the National Institute for Research in Dairying.

Early in the year, the Council decided to erect a Tent at the Royal Agricultural Show at Chester, at the Sussex Agricultural Show at Lewes, and a Stand at its own Dairy Show in October. Undoubtedly, from the membership viewpoint, the finest results came from the Dairy Show, thereby justifying the contention that the germ for the Association's expansion can best be found within its own activities.

At the close of 1925 the Membership stood at 1,623 against 1,468 at the close of 1924, an increase of 155, whereas the average increase for the past five years has been 97.

At the abandonment of the preliminary organisation set up in respect to a proposed International Dairy Congress in this Country, the British Dairy Farmers' Association stepped into the breach, called together the interests mainly concerned, with the result that a new organisation has been set up and is now busily going into ways and means for an International Dairy Congress in 1928.

The Dairy Show, of 1925, maintained its popularity in all respect, and it is a matter for profound satisfaction alike to the Members and Council that in face of circumstances which might well have resulted in a balance on the wrong side the accounts should show a balance which is only a little less than that of 1924.

As a result of Examinations held at the British Dairy Institute, Reading, Studley College, Studley, The East Anglian Institute, Chelmsford, and the Cannington Court Farm Institute, Bridgwater, 31 Diplomas with Silver Medals, 81 Buttermaking, and 57 Cheesemaking Certificates have been awarded.

Medals granted under the medal Distribution Scheme have been as under:—

							Silver	$\mathbf{Bronze}$
Dairy Cattle			•••				12	4
Produce	• • •		•••	• • • •			2	7
Buttermaking	•••			•••			5	$^2$
Clean Milk Con	ipetit	ions	•••				4.	1
Cow Judging Co	ontes	t		٠.	• • • •		1	$^2$
Dairy Herds Co	mpet	ition				•••	1	1
							-	-
							25	17
								T-000-1

The Viscount Lewisham and Mrs. M. Reeves have been elected to fill the vacancies on the Council.

In connection with Mr. Spahlinger's treatment of Tuberculosis the Council has approved the grant of £100 to the funds of the Bovine Tuberculosis Committee.

# British Dairy Farmers' Association. FINANCIAL STATEMENTS.

- Auditors.

London, E.C. 4

PERCY T. HAY, H. E. HUGHES, W. E. MANCHESTER

Dt. STATEMENT OF ASSETS AND	STATEMENT OF ASSETS AND LIABILITIES, December 31st, 1925.	Cr.	
LIABILITIES. £ s. d.	ASSETS. £	s. d. £ s d.	
Sundry Creditors 75 19 8 Conference Account 11 14 10	- y 4% De-		
Surplus of Assets over Liabilities et 31st Documber 1934.	benture Stock 265 £375 London Midland & Scottish	0 0	
200	St	0 0 0	
- 1		0 6 1	
	£1,500 L.C.C. 3% Stock 783 £400 Hertfordshire 6% Stock 389	3 17 0	
	£2,000 Metropolitan Water Board		
	# # 1 000 Victoria 54% Stock 1,037 7	7 7 8	
	£2,000 New South Wales 5%Stock 1,99	0 4 0	
	£1,000 Tasmanian 5% Stock 992 12	992 12 0	
	TO'T 20' NOT TOTAL TOTAL OF 10.	*13 335 4 8	
	Furniture and Appliances 24	+	
	Less 10 per cent. Depreciation 2	1 8 0	
	British Dairy Institute: Value of	7 11 617	
	:. ::	22 6 5	
	Show 1925 4	43 7 10	
	Cash at Bank and in hand	879 16 1	
\$14,786 \$ 10	*The value, according to Market Frice, or these Investments at 31st December, 1925, was £14,652.	E £14,786 5 10	
REPORT OF THE AUDITORS TO THE MEMBERS OF THE BRITISH DAIRY FARMERS' ASSOCIATION	OF THE BRITISH DAIRY FARMERS'	SSOCIATION.	

We have audited the foregoing Statement of Assets and Liabilities and the Income and Expenditure Account with the books and accounts of the Association. We have received all the information and explanations we have required. In our opinion such Statement of Assets and Liabilities is a full and fair statement containing the particulars required by the Regulations of the Association, and properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs according to the information and explanations we have received and as shown by the Books.

(Signed) HERBERT J. PAGE, Chartered Accountant, 1 (Signed) HERBERT J. PAGE, Chartered Accountant, 36, Walbrook, REPORT OF THE AUDITORS TO THE MEMBERS OF THE BRITISH DAIRY FARMENS

15th February, 1926.

### Gritish Dairy Farmers' Association.

### MEDAL SCHEME.

### Special Prizes at Educational Institutions and Country Shows.

The Council of the British Dairy Farmers' Association is prepared to consider applications from Educational Centres and Approved Societies in the United Kingdom for their Gold, Silver, and Bronze Medals to be awarded in connection with dairying and dairy farming under the following conditions, viz.:—

- All applications must be made on our official form and must clearly state the object for which the Medal or Medals are required.
- 2. Only one application from any Institution or Society can be considered in any one year.
- 3. The application must be repeated annually if Medals are again required.
- 4. A copy of the Proposed Prize List, showing the Conditions of the Award of the Medal and the name of the judge, should accompany the application, and the offer of a Medal cannot be confirmed until the Prize List has been approved.
- 5. The British Dairy Farmers' Association stipulates that no entry fee shall be charged in respect of these Medals, they being offered as Special Extra Prizes.
- 6. Notification of the award, with the winner's full name and address, to be forwarded to the Secretary, British Dairy Farmers' Association, 28, Russell Square, London, W.C.1, within 14 days of the award being made.
- A person may not receive more than one Medal under this Scheme for the same subject or exhibit during any one year.
- STUDENTS.—The B.D.F.A. Silver Medal for Students is reserved for those who have obtained the B.D.F.A. Diploma.

- The B.D.F.A. Bronze Medals may be awarded on application to Students gaining the first position in short course Examinations and the prospectus of the course must be forwarded with the application for the Medal.
- DAIRY PRODUCE AND BUTTERMAKING.—The B.D.F.A. will consider applications on behalf of County or similar Shows for a Silver Medal as a Championship award.
- The B.D.F.A. Bronze Medals or Certificates may be available for local Shows, and in each case shall only be awarded to the best exhibit or competitor.
- CATTLE.—The B.D.F.A. Silver Medals will only be awarded at County and similar Shows to cows or heifers' milk recorded under the Ministry of Agriculture Scheme.
- The B.D.F.A Silver Medals will only be awarded to Bulls out of recorded cows.
- The B.D.F.A. Bronze Medals for cattle will be available only at Local Shows under similar conditions.
- CLEAN MILK COMPETITIONS.—The B.D.F.A. Gold Medal may be available, on application, to the winner of clean milk competitions of six months or more duration. Silver Medals for clean milk competitions of shorter duration.

In the event of any dispute as to the interpretation of these Rules, the Council of the British Dairy Farmers' Association reserves full power of decision, and in the event of the Medal not being awarded in accordance with the above Rules and Conditions, the Council reserves the right to withhold the Medal altogether.

BY ORDER OF THE COUNCIL.

## AWARDS DURING 1925.

Applicant.	Show or Examination held at	Date.	Medal.	Winner and Object.
Kent Education Committee Wilkshire County Council	Kent	JanApril	Silver	Silver Lady Lewisham, Winner of Clean Milk Competition. Silver Major R. F. Fuller, Winner of Grade "A" Clean
Buckinghamshire County Council	Bucks	FebMay.	Silver	Mik Competition. Silver Mrs. Villnott, Winner of Clean Milk Competition (Championshin)
	:	:	Bronze	J. Gregory, Winner of Clean Milk Competition (Large Hords)
Port Elizabeth Agrıcultural Society	Port Elizabeth Mar. 24-27	h Mar. 24–27	Silver	Silver P. B. B. ande. Friesland Cow, "Hugemoot Aletta," ganning hichest nonts in Milking Trials for
Devon County Agricultural Association	Plymouth	May 12–14	Silver	Registered Animals May 12-14 Silver A. W. & N. D. Miller. "Heather," as best Milk B. Recorded South Devon Cow.
Newark Agricultural Society Newas Somenset County Agricultural Association Wells	섬	May 14 & 15 Bronze May 19-21 Silver	Silver Bronze Silver	Miss G. M. Ayre. Champion Buttermaker. Miss E. C. Clay. Champion Buttermaker. F. W. Mörley. Shorthon Cow. 'Lizzie 13th,'' as a second of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the
		:	Bronze	Fri
Yealmpton Agricultural Association	Yealmpton June 3		Bronze	Mrs. R. H. Brita Clotted Cream, as best exhibit
Royal Counties Agricultural Society Hertfordshire Agricultural Society	Portsmouth Hatfield	June 3-6	Silver	Portsmouth June 3-6 Silver Mrs. Watson. Champion Buttermaker Hatfield June 4 Silver C. Roper. "Lenborough Beatrice 2nd," as best
Suffolk Agricultural Association Saxmundham June 4 & 5 Cambridgeshire and Isle of Ely Agricultural Ely June 9 Society	Saxmundhan 1 Ely	June 4 & 5	Bronze Silver	Bronze Miss C. J. Thomson. Champion Buttermaker. Silver W. Tebbs. Shorthorn Cow, "Dorothy," as best Mlk Recorded Dairy Cow or Heifer.

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Winner and Object.	June 10 &11 Silver Mrs. R. C. Bainbudge. Guernsey Cow, "Tregonning Lucky," as the Milk Recorded Cow gaining	Mrs T.	Mis A.	G. K	Mrs. I. R. Mildon. Best exhibit of 2 lbs. Butter. J. Smith. Shorthorn Cow, "Julia," as best Milk Recorded Darry Cow.	S. C.	Welsh Drack Cow of incirc. G. Jones. "Snowdon Major," as best Welsh Black Fall out of a Milk Recorded Cow.	Silver H. A. Brown. Shorthorn Cow, "Grendon Cissy," as hest Milk Recorded Dairy ('ow.		W. R. Withers. Cow, "Pretty Maid," as best Milk Recorded Shorthorn Cow or Heifer.
Medal.	Silver	Silver Silver	Silver Silver	Silver Silver	Bronze Bronze	Silver Bronze	Bronze	Silver	Bronze Silver	Silver
Date.	June 10 &11	June 10 & 11 Silver	July 15 & 16 Silver	July 22–24 Silver Aug. 6 Silver	Aug. 7 & 8 Aug. 11	SeptDec. Sept. 3	:	Sept. 3 & 4	Sept. 4	Sept. 10 Silver
Show or Examination held at	Helston	Romford	Lewes	Bradford Tring	Harrogate Penrith	Suffolk Pwllheli	:	Leek	" "Sept. 4	Yeovil
Applicant.	Royal Cornwall Agricultural Association	Essex Agricultural Society	". Sussex County Agricultural Society	Yorkshire Agricultural Society Tring Agricultural Society	Harrogate Agricultural Society Penrith Agricultural Society	Suffolk Milk Recording Society Glannau Erch Agricultural Show	88 88	Staffordshire Agricultural Society	". Dorchester Agricultural Society	Yeovil Agricultural Society

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4		B.D.F.A. Medal Scheme.	
	Winner and Object.	Nottinghamshire Agricultural Society Wollaton Sept. 16 & 17 Silver A. H. Lamin. Champion Buttermaker.  Cheeshire Dairy Farmers' Association Dairy Show, Oct. 20-23 Silver Miss E. Harriott. Highest score in Cow-Judging Contest.  Bronze E. Wise. Third highest score in Cow-Judging Contest.  Bronze E. Wise. Third highest score in Cow-Judging Contest.  Bronze E. Wise. Third highest score in Cow-Judging Contest.  Contest.  Lancashire Cheese and Dairy Show Preston Oct. 27 Bronze I. Bronze I. Bruter. Best exhibit of Lancashire Cheese.  Somerset and North Dorset Milk Recording Somerset and Nov Silver Rise E. Maylor. Best exhibit of Butter.  Gloucestershire Root, Fruit, and Grain Society Gloucester Nov. 9 Silver Miss E. B. Taylor. Best exhibit of Cheshire Cheese in Sopen classes.	
	Medal.	17 Silver A. J. Bronze B., Bronze B., Bronze E., Bronze E., Silver B., Bronze C. J., Bronze C. J., Bronze G., Bronze G., Bronze G.,	- market to the statement
	Date.	Sept. 16 & 17 Oct. 20-23 ton Oct. 27 d Nov. 9 Nov. 11 & 12	
	Show or Examination held at	Wollaton Sept. 16 & 17 Chester Oct. 6 & 7 Dairy Show, Oct. 20–23 Islington Preston Oct. 27 g Somerset and Nov N. Dorset wy Gloucester Nov. 9	
	Applicant,	Notsinghamshire Agricultural Society Wollaton Sept. Cheshire Dairy Farmers' Association Chester Oct. 2  Young Farmers' Clubs Dairy Show, Oct. 2  Islington Blington Somerset and Dairy Show Preston Oct. Somerset and North Dorset Milk Recording Somerset and North Dorset Milk Recording Somerset and North Dorset Milk Recording Somerset and North Chestershire Root, Fruit, and Grain Society Gloucester Nov. Cheshire Dairy Farmers' Association Nantwich Nov.	

### PRIZE ESSAY ON A DAIRYING SUBJECT.

The Council offers a Prize of £10 and the B. D. F. A. Silver Medal for an Essay upon any practical or scientific subject relating to Dairy Farming or Dairying, conditionally upon sufficient merit being shown.

Preference will be given to one based on the original work and experience of the writer. Where the work of others is relied upon, full references must be given, either in footnotes or by numbers (1), (2), &c., with a list of authorities at the end.

The Essay should not exceed 5,000 words, and must be received by the undersigned on 1st December, 1926.

An Essay must be sent in a sealed envelope, bearing a nom de plume, and in another sealed small envelope, also bearing the nom de plume, the Author must insert his name and address.

The Prize Essay will be the property of the Association. Others will be returned to their respective Authors, but the Association reserve the right to retain Essays on subjects suitable for inclusion in the Annual Journal, which will be paid for at the usual rate for literary contributions.

### B. RAVENSCROFT,

Secretary,

28, Russell Square, London, W.C. 1.

### British Bairy Farmers' Association.

### Suggestions to Farmers as to how best to ensure $_{\mathtt{THF}}$

### CLEANLINESS OF THE MILK SUPPLY.

The attainment of a clean milk supply is largely dependent upon the action of Dairy Farmers themselves.

Every Dairy Farmer is financially interested in this question. Public doubt of the cleanliness of the milk supply means reduced demand for fresh milk. Public confidence means increased use of milk as food and drink—consequently a larger demand.

Any Dairy Farmer by want of reasonable care can jeopardise the reputation of the whole industry and thus destroy the good work of those whose efforts are to increase the consumption of milk.

The co-operation of every producer is confidently requested.

The main points to be emphasized are:—

- (1) That consumers are entitled to receive milk which is clean and whole-some.
- (2) That the precautions necessary to produce clean wholesome milk are easy, simple and inexpensive.

Briefly these precautions are:—

- To keep the milk sheds and cows as clean as possible.
- To clean the udders and, before milking, wipe them with a clean damp cloth, rinsed after every cow.
- To use a partly covered milking pail.
- To see that milkers milk with clean hands.
- To strain the milk through a strainer fitted with a new disc of cotton wool at each milking.
- To empty water from cooler before washing.
- To rinse utensils in cold water. Thoroughly wash in hot water and soda and scald in boiling water or, preferably, sterilise with steam or by boiling in water.
- To stand utensils upside down to drain after cleaning and NOT to wipe them.

THIS ASSOCIATION APPEALS TO EVERY DAIRY FARMER TO PUT THESE PRECAUTIONS INTO OPERATION, BEING CONVINCED THAT IF PRODUCERS DO NOT TAKE MEANS TO ENSURE A CLEAN WHOLESOME MILK SUPPLY THE DEMAND FOR FRESH MILK WILL SERIOUSLY DIMINISH.

Correspondence on this subject will receive attention at the Offices of the Association, 28, Russell Square, London, W.C. 1.

### British Dairy Farmers' Association,

### **EXAMINATION FOR** THE B. D. F. A. DIPLOMA.

The Association grants to any Candidate who satisfactorily passes the necessary Examinations :-

A Diploma and Silver Medal for Proficiency in the Science and Practice of Dairving.

Candidates for the Diploma must have previously obtained the Butter and Cheesemaking Certificates of the Association,\* and must produce satisfactory evidence that they have received not less than one year's scientific and practical instruction at some recognised centre for Dairying Instruction, and have spent at least twelve months on a Dairy Farm in addition to the time spent at the Centre.

The Examination will extend over three or more days, and will test the Candidates' knowledge and experience of the Principles and Practice of Dairving and Dairy Farming. The Candidates will also be required to satisfy the Examiners

with regard to their skill in Butter and Cheesemaking.

Candidates will be required to answer, in writing, sets of questions within a given time, and will also be examined viva voce. They will be expected to possess a sound knowledge of all the subjects included in the following Svllabus. Candidates, if required, must produce their note-books of Lectures and Demonstrations attended.

The Practical Examination will include Buttermaking, and also the preparation of one Hard-pressed Cheese, either Cheddar, Cheshire or Derby, to be selected by the Examiner, and one Blue-veined Cheese, either Stilton or Wensleydale, to be selected by the Candidate.

The Diploma of the Association will be awarded to all Candidates who obtain not less than :-

(a) 66 per cent of the total possible marks for the Theoretical Examinations, and not less than 60 per cent, in each and every written paper.

(b) 75 per cent. in the Practical Examinations.

The Diploma with Honours will be awarded to Candidates satisfying the following conditions:—
(1) The total marks obtained shall be not less than 75 per cent. of the

possible marks for the whole Examination.

(2) The Candidate shall obtain not less than 70 per cent. of the possible

marks for each and every written paper.

(3) The Candidate shall obtain not less than 80 per cent. of the possible marks in each Practical Examination (Cheese and Buttermaking).

### EXEMPTION FROM THE PRACTICAL EXAMINATIONS.

Candidates will be considered to have satisfied the Examiners in either Cheese or Buttermaking, or both, if they have already obtained not less than 80 per cent. of the marks in the respective Practical Examinations for the Cheese and Buttermaking Certificates granted by this Association. Such Candidates will not be required to submit themselves to any further test in either Cheese or Buttermaking, or both as the case may be, but will be given credit for their practical skill.

### Note.

Candidates excused the Practical Examination in Cheese and/or Buttermaking will have precisely the same opportunity of securing the Diploma or the Diploma with Honours as other Candidates who take both the Theoretical and Practical branches of the Examination at the same time.

<sup>\*</sup> Equivalent Certificates of recognised Bodies will be accepted by the Association as evidence of sufficient training to justify entry for this Examination, but not for exemption from the Practical Tests in the Diploma Examination.

Examinations for the Diploma are held in the Autumn upon dates to be announced in the Agricultural and Dairy Press.

Entries will close 28 days prior to the date fixed for the commencement of the Examination.

The entry fee is 20s.

### SYLLABUS.

### 1. DAIRYING.

(a) Milk.—The Food Value of Milk; The Yield of Milk from various Breeds; Secretion of Milk and Structure of the Udder; Milking by Hand and Machine; Handling of Milk from Cow to Dairy; Importance of Cleanliness; Production of Highest Grade Milk; Cooling of Milk: Sale of Milk; Influence of Food on the Yield, Flavour, and Fat Contents of Milk; Composition of Milk, Nature and Properties of its Constituents; Differences between Morning and Evening Milk and their Causes; Methods of Sampling and Simple Methods of Testing Milk, as the Lactometer, Creamometer and Centrifugal Fat Testers; Testing for Acidity; Causes of Fermentation; Colostrum, its Nature and Properties; the Keeping of Dairy Records; the Handling of Evening's Milk for Cheesemaking; Properties of Milk suitable for Cheesemaking; Taints in Milk—their Causes, Effects and Remedies; Tests for such Taints; the Ripening of Milk for Cheesemaking; Methods and Reasons for Ripening; use of Natural and "Culture" Starters; Pasteurisation of Milk; Chilled Milk: their Subsequent Use for Cheesemaking; Special Testing of Milk, Whey, and Curd requisite in a Cheese Dairy; Utilisation of Dairy Ry-products.

of Dairy By-products.

(b) Cream.—The Various Methods of obtaining Cream; the Construction and Use of the Utensils Employed; Separators, the Construction and Use of the various Types; Composition of Cream, Separated Milk, Skimmed Milk and Butter-milk, with Simple Tests for Fat in same; the Ripening of Cream, Objects and Results; Changes during Ripening; Testing for Acidity; Natural and Artificial Ripening and Preparation of Starters; the Preparation of Cream for Churning; Preparation of Cream for

Sale : Clotted Cream.

(c) Butter.—The Various Methods of obtaining Butter, including the Churning of Whole Milk; Utensils required and the Preparation, Use and Care of same; the Process of Butter Manufacture in all its Details; Conditions which affect the Butter Yield; Circumstances affecting the Flavour, Texture, Colour and Keeping Properties of Butter; Dry-salting and Curing of Butter; Faults in Butter and their Causes; Composition and Properties of Good Butter; Composition and Causes of Inferior Butter; Methods of Judging Butter. Candidates will be required to satisfy the

Examiners with regard to their practical skill in buttermaking.

(d) Cheese.—Rennet: its Preparation, Properties, and Action upon Milk; Testing its Strength; Storage of Rennet; Substitutes for Rennet; Annatto; a General Knowledge of the Manufacture of the Principal Varieties of Hard-pressed, Blue-veined, and Soft Cheeses, including the use of Wood and Metal Tubs and Jacketed Vats; Methods of Scalding; the Development and Control of Acidity in Curd; Salting and Brining in Cheesemaking; Bandaging; Ripening and Storing of Hard-pressed, Blue-veined and Soft Cheeses; Defects in Cheese and their Causes; Composition of Cheese; Composition and Utilisation of Whey; the Manufacture of Whey Butter; the Equipment of a Cheese Dairy and its Cost; the Care of Utensils

Candidates will be required to make one Hard-pressed Cheese, either Cheddar, Cheshire, or Derby, to be selected by the Examiner, and one Blue-veined Cheese, either Stilton or Wensleydale, to be selected by the Candidate. They must also have a knowledge of the manufacture of other varieties of Hard-pressed Cheese, and of Soft

Cheese.

### 2 DATRY FARMING.

- (a) A General Knowledge of Dairy Farm Management, including the Cultivation of Farm Crops, with a Special Knowledge of those employed in the Feeding of Dairy Stock.
- (b) Foods and Feeding.—The Effects of various Foods on Milk and Dairy Products; Systems of Feeding and the Compilation of Rations.
- (c) Live Stock.—Characteristics and Management of Different Breeds of Cattle; their Breeding and Rearing; Choice of Dairy Cattle for Special Purposes and Situations; Identification and Treatment of Common Ailments of Dairy Stock; Pigs and Poultry; Suitable Breeds for Use in Connection with a Dairy Farm and their Management.
- (d) Buildings suitable for a Dairy Farm: their Situation, Construction, Ventilation, Drainage, &c.; Water Supply.
- (e) Milk Records; Business Methods involved in Dairying; Book-keeping on a Dairy Farm.
- (f) Improvement in Equipment and Methods on Dairy Farms; the Use of Score Cards.

### 3. CHEMISTRY.

- (a) General.—The Chemical Elements and Constituents found in Milk, Soils, Plants, Manures, Animals, and Foods: their Nature and Properties so far as they relate to Agriculture; the simpler Laws o Chemical Combination and Change so far as regards these Substances.
- (b) Dairy.—The Composition and Properties of Milk, Cream, Butter, Cheese, and Dairy Products, and of all Substances used in the Dairy; Simple Methods of Analysis as applied to these Substances; the Chemical Changes which may take place in Milk, Cream, Butter, &c.; Water Supply.

### 4. BACTERIOLOGY.

- (a) General.—Bacteria, their Form, Classification, Growth and Reproduction; The Microscope and its Use; Staining and Microscopic Examination of Bacteria; Methods of Isolation and Cultivation; Preparation of Culture Media; Fermentations and Chemical Changes produced by Bacteria; Enzymes and their Action; Effects of Heat, Cold, Sterilisation, Pasteurisation, Disinfectants, and Preservatives on Bacteria and Enzymes.
- (b) Dairy Bacteriology.—The Bacteria of Milk and Dairy Products; Examination of Milk for Foreign Bodies, Sediment, Blood, Pus, and Pathogenic Organisms; the Bacteriology of Milk, Cream, Butter, and Cheese; Commercial Bacterial Preparations for use in the Dairy; Bacteria Injurious to Dairy Produce: their Source, Nature, and Treatment; Bacterial and other Standards in relation to the Cleanliness of Milk.
- (c) Fungi (Moulds) and Yeasts.—Their Forms, Classification, and Growth; their Relation to Dairy Produce.

### 5. Instruction.

Capacity to impart Instruction.—Organisation of Dairy Courses suitable to different Districts.

### EXAMINATION FOR

### CHEESEMAKING CERTIFICATE.

The Association grants to any Candidate who satisfactorily passes the necessary Examination—

A Certificate of Merit for Proficiency in the Theory and Practice of Cheese-making.

The Examination, which will extend over two or more days, will test the Theoretical Knowledge of the Candidates and their Practical Skill in Cheesemaking. Each Competitor will be required to answer, in writing, a set of questions within a given time, and will also be examined *viva voce*. On the same or following day a Practical Examination in Cheesemaking will take place.

Candidates will be considered to have passed the Examination if they obtain not less than 60 per cent. of the marks on each and every written paper and not less than 66 per cent. in the Practical test.

Candidates passing the Examination and obtaining 80 per cent. and over of the possible marks in the Practical Test will be excused the Practical Examination in Cheesemaking at the Diploma Examination. Notification of this exemption will be made by letter, as no endorsement to this effect is permitted on the Cheesemaking Certificate.

Candidates for this Certificate must, at the time of entry, produce satisfactory evidence that they have received at least twelve months' instruction in the Theory and Practice of Cheesemaking, of which at least six months must have been spent at a recognised centre for dairy instruction. They must possess a sound knowledge of the subjects included in the following Syllabus.

Candidates will be required to make one Hard-pressed Cheese, either Cheddar, Cheshire or Derby, to be selected by the Examiner, and one Blue-veined Cheese, either Stilton or Wensleydale, to be selected by the Candidate. They must also have a knowledge of the manufacture of other varieties of Hard-pressed Cheese and of Soft Cheese.

Candidates are at liberty to bring their own utensils for the Practical Examination if they wish to do so.

Examinations for Cheesemaking Certificates are held twice a year, viz., in the Spring and Autumn, upon dates announced in the Agricultural and Dairy Press

Entries will close 28 days prior to the date fixed for the Examination.

The Entry Fee is 10s.

### SYLLABUS.

 Milk.—The Food Value of Milk; The Yield of Milk from various Breeds; Secretion of Milk and Structure of the Udder; Milking by Hand and Machine; Handling of Milk from Cow to Dairy; Importance of Cleanliness; Production of Highest Grade Milk; Cooling of Milk; Sale of Milk; Influence of Food on the Yield, Flavour and Fat Contents of Milk, Composition of Milk, Nature and Properties of its Constituents; Differences between Morning and Evening Milk and their Causes; Methods of Sampling and Simple Methods of Testing Milk, as the Lactometer, Creamometer, and Centrifugal Fat Testers; Testing for Acidity; Causes of Fermentation: Colostrum, its nature and properties; the Keeping of Dary Records; the Handling of Evening's Milk for Cheesemaking; Properties of Milk suitable for Cheesemaking; Taints in Milk, their Causes, Effects and Remedies; Tests for such Taints; the Ripening of Milk for Cheesemaking; Methods and Reasons for Ripening; use of Natural and "Culture" Starters; Pasteurisation of Milk; Chilled Milk; their Subsequent use for Cheesemaking; Special Testing of Milk, Whey, and Curd requisite in a Cheese Dairy; Utilisation of Dairy By-products.

- 2. Cheese.—Rennet: its Preparation, Properties, and Action upon Milk; Testing its Strength; Storage of Rennet; Substitutes for Rennet; Annatto; a General Knowledge of the Manufacture of the Principal Varieties of Hard-pressed, Blue-veined, and Soft Cheeses, including the use of wood and metal tubs and jacketed vats; Methods of Scalding; the Development and Control of Acidity in Curd; Salting and Brining in Cheesemaking; Bandaging; Ripening and Storing of Hard-pressed, Blue-veined and Soft Cheeses; Defects in Cheese and their causes; Composition of Cheese; Composition and Utilisation of Whey; the Manufacture of Whey Butter; the Equipment of a Cheese Dairy and its Cost; the care of Utensils; the Detailed Principles and Practice requisite for the Manufacture of one of the following types of Cheese:—
  - (a) A Hard-pressed British Cheese (not less than 25 lbs. weight).
  - (b) A Blue-veined British Cheese (not less than 10 lbs. weight).

### EXAMINATION FOR BUTTERMAKING CERTIFICATE.

The Association grants to any Candidate who satisfactorily passes the necessary Examination—

A Certificate of Merit for Proficiency in the Theory and Practice of Butter-making.

The Examination, which will extend over two or more days, will test the Theoretical Knowledge of the Candidates and their Practical Skill in Buttermaking. Each Competitor will be required to answer, in writing, a set of questions within a given time, and will also be examined *viva voce*. (In the same or following day a Practical Examination in Buttermaking will take place.

Candidates will be considered to have passed the Examination if they obtain not less than 60 per cent, on each and every written paper, and not less than

66 per cent, in the Practical Test.

Candidates passing the Examination and obtaining 80 per cent. and over of the possible marks in the Practical Test will be excused the Practical Examination in Buttermaking at the Diploma Examination. Notification of this exemption will be made by letter, as no endorsement to this effect is permitted on the Buttermaking Certificate.

Candidates for this Certificate must, at the time of entry, produce satisfactory evidence that they have received at least three months' instruction (not necessarily at a Dairy School) in the Theory and Practice of Buttermaking. They must possess a sound knowledge of the subjects included in the following Syllabus. They

will be required to make Butter.

Candidates are at liberty to bring their own utensils for the Practical Examina-

tion if they wish to do so.

Examinations for Buttermaking Certificates are held twice a year, viz., in the Spring and Autumn, upon dates announced in the Agricultural and Dairy Press.

Entries will close 28 days prior to the date fixed for the Examination. The Entry Fee is 5s.

### SYLLABUS.

1. Milk.—The Food Value of Milk; the Yield of Milk from various Breeds; Secretion of Milk and Structure of the Udder; Milking by Hand and Machine; Handling of Milk from cow to dairy; Importance of Cleanliness; Production of Highest Grade Milk; Coling of Milk; Sale of Milk; Influence of Foods on the Yield, Flavour and Fat Contents of Milk; Composition of Milk, Nature and Properties of its constituents; Differences between Morning and Evening Milk and their causes; Methods of Sampling and Simple Methods of Testing Milk, as the Lactometer, Creamometer, and Centrifugal Fat Testers; Testing for Acidity; Causes of Fermentation; Colostrum, its nature and properties; the Keeping of Dairy Records.

2. Cream.—The Various Methods of Obtaining Cream; the Construction and Use of the Utensils employed; Separators, the Construction and Use of the various Types; Composition of Cream, Separated Milk, Skimmed Milk, and Butter-milk, with Simple Tests for Fat in same; the Ripening of Cream—Objects and Results; Changes during Ripening; Testing for Acidity; Natural and Artificial Ripening and Preparation of Starters; the Preparation of Cream for Churning; Preparation of Cream for Sale;

Clotted Cream.

3. Butter.—The Various Methods of Obtaining Butter, including the Churning of Whole Milk; Utensils required, and the Preparation, Use, and Care of same; the Process of Butter Manufacture in all its details; Conditions which affect the Butter Yield; Circumstances affecting the Flavour, Texture, Colour, and Keeping Properties of Butter; Dry-salting and Curing of Butter; Faults in Butter and their causes; Composition and Properties of Good Butter; Composition and Causes of Inferior Butter; Methods of Judging Butter.

### EXAMINATION FOR

### FACTORY MANAGER'S DIPLOMA.

Regulations and Syllabus, viz. :-

Candidates must hold the British Dairy Farmers' Association's Diploma or the National Dairy Diploma.

They must have subsequently spent at least six summer months in a Factory dealing with not less than 500 gallons of milk daily.

Candidates will write answers to a paper and be examined orally and practically on the following:—

- 1. Factory: the Site, Construction, and Requirements of a Factory.
- 2. Lighting and Power in the Factory.
- 3. Boilers, Engines, Shafting, Fittings, and Apparatus, their disposition and control.
- 4. Maintenance and Cleansing of Factory and disposal of Waste.
- 5. Organisation of Labour and use of Labour-saving Devices.
- Milk, management of, on arriving at Factory: Weighing, Sampling, Testing, Recording, Cleaning, &c.
- 7. Methods of dealing with the Milk for (a) Sale; (b) Cream Production; (c) Buttermaking; (d) Cheesemaking; (e) Other Products.
- 8. Refrigerating Machinery and its use.
- . 9. Cold Stores and their Management.
- 10. Pasteurising and Sterilising Machinery and its use.
- 11. Cream, preparation of, for Market.
- 12. Butter: Manufacture and Treatment.
- 13. Cheese: Manufacture and Treatment.
- 14. Utilisation of Bye-products.
- 15. Pig-keeping.
- 16. Business Management; Book-keeping; Stocktaking and Depreciation; Contracts; Railway Rates and Conditions; Statements; Notices, &c.
- 17. Law, so far as it affects the Factory, the Management, and the Produce, including main provisions of Factory and Workshop Act; Workmen's Compensation; Health Insurance; Employers' Liability; Rivers Pollution Act; Industrial and Provident Societies Act; Sale of Food and Drugs Act; Milk and Dairies Acts, and other Legislation as it affects the Working of Factories and the Manufacture and Sale of Dairy Produce.

The Entry Fee for each Candidate is fixed at £4 4s.

Particulars and Entry Forms for all Examinations may be obtained from

THE SECRETARY,

BRITISH DAIRY FARMERS' ASSOCIATION,

28, Russell Square, London, W.C. 1.

### **EXAMINATIONS**

ÅT.

### LOCAL CENTRES.

In order to meet the convenience of Students at Dairy Schools, members of local Societies, and other persons, the Association will conduct Examinations for its Diplomas and Certificates at any place in the United Kingdom upon receiving satisfactory proof that the following conditions will be observed:—

That the School, Society, County Council, or other body requesting such an Examination to be held, undertake:—

- (1) To supply all necessary appliances and materials.
- (2) To pay the fees and expenses of the Examiners.
- (3) To supply the milk required free from preservatives and fit for Cheesemaking.

Copies of Question Papers set at recent Examinations may be obtained at 3d. per copy.

Applicants are requested to state whether Diploma, Cheese, or Butter Questions are required.

Further particulars and Entry Forms for Students may be obtained from

The SECRETARY,

BRITISH DAIRY FARMERS' ASSOCIATION,

28, Russell Square, London, W.C. 1.

### COMBINED DAIRY (EDUCATION) COMMITTEE.

### Memorandum re Diploma and Certificate Courses in Dairying.

It is proposed to bring the following Diploma Syllabuses into force in October, 1925, so that the first Examination on these Syllabuses will take place in 1927. Amended regulations will be issued in due course.

On the invitation of the Council of the British Dairy Farmers' Association a meeting was held at the Agricultural Hall on Friday, 21st October, 1921, to consider what steps might be taken to improve the training and standard of examinations for Certificates and Diplomas in Dairying.

On the motion of Lord Bledisloe, seconded by Mr. Burkitt, the

following resolution was passed:-

"That a Committee be forthwith constituted to consider in what directions, if any, the conditions now regulating the training and examinations for the various Certificates and Diplomas require amendment."

It was suggested that the Committee might consist of representatives of the Royal Agricultural Society, the Highland and Agricultural Society, the British Dairy Farmers' Association and certain educational institutions, with power to add to its number.

The Committee was primarily constituted as follows:-

Ernest Mathews, Esq., C.V.O., L.L.D., representing The Royal Agricultural Society of England.

Chas. Douglas, Esq., C.B., D.Sc., representing The Highland and Agricultural Society.

J. Benson, Esq., representing The British Dairy Farmers' Association.

Prof. H. A. D. Neville, M.A., representing The University College, Reading.

Wm. Goodwin, Esq., Ph.D., representing The Midland Agricultural and Dairy College.

S. H. Gater, Esq., M.A., representing The Lancashire County Council Dairy School.

Prof. W. G. R. Paterson, B.Sc., representing The West of Scotland Agricultural College.

Prof. A. E. Jones, B.Sc., representing the University College of Wales.

Prof. R. G. White, B.Sc., representing the University College of North Wales.

Principal D. R. Edwardes-Ker, O.B.E., M.A., representing The Seale Hayne Agricultural College.

Alexander Hay, Esq., N.D.A., N.D.D., representing The East Anglian Institute of Agriculture. The following members were also appointed to serve on the Committee:—

Prof. R. Stenhouse Williams, M.B., B.Sc., J. Mackintosh, Esq., O.B.E., 

National Institute for Research in Dairying.

Alec Todd, Esq., representing The Agricultural Education Association.

Dr. Goodwin has since resigned from the Committee and has been succeeded by Dr. Milburn, while Mr. J. J. Green, B.Sc., Secretary for Agriculture to the Lancashire County Council, has acted on behalf of Mr. Gater.

The first meeting of the Committee was held in the Council Rooms of the British Dairy Farmers' Association on the 27th April, 1922, and after a brief discussion on courses in Dairying at present in existence, it was decided to make a complete review of Dairy Courses and Dairy Examinations in existence at the present time, which has involved twelve meetings of the Committee and Sub-Committees, and as a result of this detailed survey, the following recommendations are put forward by the Committee for Diploma Courses in Dairying and Certificate Courses in Dairy Factory Management.

#### DIPLOMA IN DAIRYING.

The Committee recommend that for a Dairy Diploma Examination five foundation papers are necessary, and the papers suggested are:—

- 1. Dairy Farming and Dairy Hygiene.
  - (a) Dairy Farming.
  - (b) Dairy Hygiene.
- 2. Dairying.
  - (a) Principles of Dairying.
  - (b) Dairy Factory Management and Dairy Engineering.
- 3. Dairy Chemistry.
  - (a) General Chemistry and Physics.
  - (b) Dairy Chemistry.
- 4. Dairy Bacteriology.
- 5. Dairy Book-keeping.

In addition, all candidates will be required to demonstrate their practical skill.

DURATION OF COURSE.

They further recommend that the duration of a Diploma Course in Dairying be two academic years, this period to include six months' practical instruction in Dairying.

#### PRACTICAL FARM WORK.

They also recommend that a candidate for a Diploma in Dairying produce evidence that he or she has spent at least six months on a recognised Dairy Farm, and that he or she has taken part in the work of the farm; such practical work to be in addition to the two years of study outlined in the above recommendation.

#### Type of Course Suggested.

For a Diploma Examination on the lines suggested the Committee recommend a course of instruction on the following lines:—

<ul><li>(3) Soils and Cultivation</li><li>(4) Plant Physiology</li><li>(5) Crop Management</li></ul>	c Pro  	oduction	Approx Le	ximate nu	mber of hours. ractical Work
(1) Dairy Economics	•••	•••	•••		_
				170	
B. Dairy Hygiene.			•		
(1) Animal Physiology	•••		}	50	_
Paper 2. Dairying.					
A. Principles of Dairying				six pra stru a	nd at least months' ctical in- action at recognised ary Centre.
B. (1) Factory Practice ar	id M	anagem	$_{ m ent}$	20	
(2) Dairy Engineering	•••	•••	•••	20	Manager 1994
Paper 3. Dairy Chemistry	r.				
A. General Chemistry and	l Ph	ysics	•••	75	100
B. Dairy Chemistry (inc Nutrition)		•	mal 	60	80
PAPER 4. DAIRY BACTERIOL	OGY	•••		60	100
Paper 5. Dairy Book-Kee	PING		•••	60 hr	s. instruc-

### SYLLABUS OF SUBJECTS OF EXAMINATION

The Committee recommend the following Syllabus of Examination as one which covers the instruction necessary for a Diploma Course on the lines suggested in the above recommendation:—

## 1. Dairy Farming and Dairy Hygiene.

## (a) DATRY FARMING.

Dairy Cattle.—Characteristics of different breeds and choice of dairy cattle. The milk yields of the more important breeds, and suitability for the milk trade, cream, butter and cheese production.

Foods and Feeding.—Summer and winter feeding of dairy cattle. Root and fodder crops. Green forage. Ensilage. Different kinds of food and their relative composition. The effect of food upon milk, butter and cheese. Special foods used for dairy stock. Preparation of food for dairy stock. Feeding of calves and young stock.

Housing and Management.—The situation, chief dimensions and construction of cow houses; ventilation, drainage, water supply. Systems of herd management, including management of herd bulls amd in-calf heifers. Cattle breeding and grading up of dairy stock. Systems of calf rearing. The housing and management of young stock.

Milk Recording.—Systems and utilisation of results. Details of official schemes.

Milk Production.—Factors influencing the yield and quantity of milk. Milking by hand and machine. Location and equipment of farm dairies. The production and sale of clean milk. The treatment of milk from the cow to the milk factory or consumer.

Management of Pigs.—Characteristics of the more important breeds. Feeding of pigs. The management of sows and breeding stock. Farrowing, weaning, rearing and fattening of pigs. Systems of pig keeping, including outdoor management. The production of pork and bacon.

Soil and Cultivation.—Types of soils suitable for dairying. Fertility in soils. Soil cultivation. Manures and manuring of arable and grass land.

Plant Physiology.—Fruits and seeds of agricultural plants. Roots and shoots. Flower construction and seed formation. Experiments to demonstrate the fundimental facts of plant physiology.

Crop Management.—Rotations and systems of cropping. Cultivation, manuring and management of roots, forage and other crops used in dairying. Silage crops. Temporary and permanent pasture. Haymaking.

Farm Management.—Systems of dairy farming. The selection, stocking and equipment of typical farms. The organisation of the farm and disposal of produce. Cost of milk production.

Dairy Economics.—The dairy industry of Great Britain and its relationship to agriculture. The relative importance of the various products. The retail milk trade. Markets. Dairy organisation and co-operation. Modern developments in the dairy industry. American, Colonial and Continental dairying.

## (b) DAIRY HYGIENE.

Animal Physiology.—General functions of the organs of the animal body. Breeding. Parturition. The structure of the udder and the process of milk secretion. Changes which food undergoes during digestion.

Veterinary Hygiene.—The more important diseases of dairy cattle and their remedies. The transmission and eradication of disease.

Milk Hygiene.—Sanitary conditions. Air space and ventilation. Suitability of water supply, temperature, &c. Methods of milking and handling of milk. Transportation. Prevention of contamination. Pasteurisation. Sterilisation. Legislation affecting milk production. Milk in relation to public health.

#### 2. DATRYING.

## (a) Principles of Dairying.

Milk.—Condition on delivery. Use of utensils and appliances. Cooling of milk. Importance of cleanliness. Keeping of milk. Legal standards. Methods of utilisation of milk and their comparative returns.

Milk Testing and Sampling.—The use of the Gerber and Babcock fat testers. Lactometer readings. Scale readings. Sample of milk for testing. Interpretation of results.

Cream.—Separators and their management. Different systems of cream raising and ripening of cream. Changes during ripening. Natural and artificial ripening and preparation and uses of starters. Preparation of cream for sale. Use of preservatives. Clotted cream.

Butter.—Churns and buttermaking appliances. Preparation of cream for churning. Washing and working butter. Butter milk. Packing and transmission of butter. Selection and keeping of butter. Salting. Use of preservatives. Characteristics of good butter and method of judging. Circumstances affecting the flavour, texture, colour and keeping qualities of butter. Potting butter for keeping. Causes of inferior butter.

Cheese.—Principles of manufacture. Appliances for cheesemaking. The making of the principal varieties of British, Colonial and Continental cheese from cream, whole milk and skim milk. Acidity of milk, Common tests for acidity. Use of rennet and its substitutes. Whey, Ripening and storage of cheese. Packing and sale of cheese. Making of cream and other soft cheese. Defects in cheese and their causes. Judging cheese.

Dairy By-Products.—Composition, uses and value of skim milk, butter-milk and whey.

## (b) DAIRY FACTORY MANAGEMENT AND DAIRY ENGINEERING.

Factory Practice.—Milk depôts and handling of factory milk. Systems of cooling and refrigeration. Pasteurisation. Factory butter and cheese making. Milk Powders. Condensed milk. Frozen milk. Ice cream. Dried casein. Fermented milk. Lactose and whey-butter. Margarine manufacture. Equipment of milk depôts, butter. cheese and dairy factories.

Factory Management.—Factory routine. Organisation of labour. Handling of milk on arrival at the factory. Methods of dealing with the milk. Milk contracts. Dairy factory legislation.

Production of Power.—The various forms of energy as used for the production of power.

Machinery.—Care and management of engines and boilers. Power transmission. Construction and use of dairy factory machinery. Refrigerating machinery.

Dairy Appliances.—Appliances used in the production and handling of milk, butter, and cheese making. Milk testing apparatus.

Buildings.—Situation, construction and drainage of creameries, milk depôts and dairy factories.

#### 3. Dairy Chemistry.

## (a) GENERAL CHEMISTRY AND PHYSICS.

General Principles of Chemistry.—The nature of elements and compound bodies. The different forms of matter, solid, liquid, gaseous. Specific gravity and instruments for determining it. Specific heat. Temperature and methods of measuring it. Thermometric scales. The influence of temperature in dairy operations. Physical and chemical changes involved in the following: Solution, precipitation, filtration, distillation, oxidation and reduction. Acids: Bases; Salts: their distinctive properties and quantitative estimation. Examination and identification of specimens and apparatus.

The Atmosphere.—Its constituents and impurities; its influence on dairy operations. Atmospheric pressure.

Water.—Constituents of pure and natural waters. The impurities of water and whence derived. The importance of a pure water supply in dairying.

Inorganic and Organic Chemistry.—General knowledge of the elementary chemistry of the following substances and their compounds so far as met with in dairying: Potash, soda, ammonia, lime, phosphoric acid, alcohol, acetic acid, carbonic acid, butyric acid, lactic acid albumen, casein, fats, milk-sugar, glycerine, pepsin, saponification of fats.

#### (b) DAIRY CHEMISTRY.

Chemistry of Milk.—The nature, composition, properties and chemical constituents of milk. Microscopical appearances presented by milk. The influence of feeding. The changes which occur in the keeping of milk, and how produced. The natural and artificial souring of milk. Rennet, its nature and use.

Milk Products.—Physical and chemical changes involved in the making and keeping of butter and in the manufacture and ripening of cheese. Separated milk. Condensed milk. Fermented milk. Synthetic milk. The use of preservatives.

Dairy Analysis.—Analytical methods, their theory and practices. A general knowledge of the methods employed in the chemical analysis of milk, butter and cheese. Adulteration of milk, cream, butter and cheese, the ways in which adulteration is practised, the changes in composition thereby produced, and a general knowledge of the methods employed in detecting the same.

Chemistry of Feeding.—The principal constituents of food materials and the functions they severally fulfil. The influence of food constituents on milk production. Assimilation and digestion. The manurial value of foods. Milk and milk products as foods.

#### 4. Dairy Bacteriology.

General Bacteriology.—Bacteria; their form, classification, growth and reproduction. The microscope and its use. Staining and microscopic examination of bacteria. Methods of isolation and cultivation. Preparation of culture media. Fermentations and chemical changes produced by bacteria. Enzymes and their action. Effects of heat, cold, sterilisation, pasteurisation, disinfectants and preservatives on bacteria and enzymes. Bacteriological examination of water supplies.

Bacteriology of Milk.—The changes produced by bacteria in milk. Useful forms and their functions. Harmful forms and their effects. Coagulation, discolouration, taints, &c. Bacteriological and other standards in relation to the cleanliness of milk.

Milk Products.—The bacteria concerned in the ripening of cream and butter making. "Starters": their preparation and management. The ripening of hard, soft and blue-veined cheese. Bacteria injurious to milk products, including condensed and dried milk.

Dairy Mycology.—Moulds and yeasts in dairy practice. Their form, classification, growth and relation to dairy products.

#### 5. BOOK-KEEPING.

General Principles.—Principles of double entry book-keeping. Use of diary, journal, cash book and ledger. Posting to ledger. Preparation of profit and loss account and balance sheet. Systems of valuation.

Farm Book-keeping.—Application of the principles of book-keeping to dairy farming and to the sale of milk in bulk or by retail. Milk ledgers and customers' accounts.

Factory Accounts.—Methods of book-keeping as applied to milk depôts and dairy factories.

Business Management.—General office work. Banking and use of cheques.

# CERTIFICATE IN DAIRY FACTORY MANAGEMENT.

The Committee recommend that the most desirable course for Factory Managers is as follows:—

- 1. The possession of an approved Dairy Diploma.
- 2. Six months' practical instruction at an approved dairy factory.
- 3. Possession of a Certificate obtained by examination.

#### EXAMINATION IN FACTORY MANAGEMENT.

The Committee make the following recommendations with regard to an Examination in Dairy Factory Management.

- 1. That a candidate be examined in two papers as outlined in the Syllabus submitted.
- 2. That the said candidate be examined orally in Factory Management with reference to the type of factory in which the practical training has been obtained.
- 3. That the said candidate submit full notes of the work which has been carried out in the factory in which the practical experience has been obtained, and such notes to be submitted to the examiners for inspection.

#### SYLLABUS OF EXAMINATION.

The following Syllabus of Examination is recommended for those students who have obtained a Diploma in Dairying and wish to take the Factory Managers' Certificate. The Committee are of opinion that this Syllabus should not be viewed from a purely engineering standpoint, but students will be expected to have a general knowledge of the management of factory machinery:—

# PAPER 1. PLANNING, EQUIPMENT AND MANAGEMENT OF A DAIRY FACTORY

Dairy Factories.—Site, building materials, construction, laying of floors, lighting, ventilation, drainage, sanitation, disposal and treatment of sewage and factory waste. Space requirements for the common types and sizes of factories.

Water Supply.—Water requirements; sources of supply. Examination for quality and purity. Methods of purification. Suitability of water supplies for dairy purposes. Sites for wells. Construction of wells. Artesian wells. Pumps for deep and shallow wells. Air lift pumps.

Factory Equipment.—Artificial lighting and sources of power in the factory. Equipment required for various types of factories and approximate cost of same. The disposition and control of factory machinery.

Steam Plant.—Types of vertical and horizontal boilers and their relative advantages and disadvantages. Sizes of boilers required in dairy factories. Evaporating power of boilers. Setting and insulation. Cleaning out of boilers. Economical firing. Fuel used, e.g., coal, coke and wood. Cost and calorific value. Fuel consumption and cost of steam production. Allocation of steam supply to different purposes in the factory. Boiler smoke stacks and their construction. Boiler fittings, including donkey pumps and water injectors. Feed heaters. Methods of economising steam supply.

Factory Machinery.—Steam, gas and oil engines. Electric motors, turbines, water power, comparison of the various types and their relative efficiency Construction and working of the various types. Cost of maintenance. Power requirements of the factory and the most suitable combinations of power when different sources of energy are available. The management and fitting up of machinery, including electric fittings. Adjustment of bearings. Packing of glands. Fixing of brackets, &c. Lubrication of machinery. Oil containers and filters. Lubricants. Lubrication of high speed machinery. Oils and grease for shafting. Arrangement of machinery and methods of transmitting power. Belts, types and uses. Repairs to belting. Pulleys and gearing. Methods of increasing and reducing speed. Laboursaving devices. Tools required for a dairy factory.

Factory Plants.—Construction and operation of milk apparatus, including clarifiers, pasteurisers, separators, milk pumps, refrigerators, &c. Refrigerating machinery, CO and ammonia. Methods of operation and management. Cold storage and brine cooling. Efficiency in the transfer of heat in heating and cooling apparatus. Methods of carrying out efficiency tests under different conditions and outputs. Factory appliances, including cheese vats, holding vats, power churns, bottling machinery and other factory equipment. Their approximate cost and suitability of the various types. Methods of cleaning equipment, utensils and milk churns.

Factory Management.—Organisation of labour. Business management. Book-keeping. Cost accounts. Profit and loss in manufacturing. Stock-taking and depreciation. Railway rates and conditions. Road transport. Systems and comparative costs. Advertising. Markets and sale of produce. Co-operative organisation.

Factory Law.—Law as far as it affects the factory, the management and the produce. Factory and Workshops Act. Workmen's Compensation. Health Insurance. Employer's Liability and Trade Boards Acts. Industrial and Provident Societies Act. Rivers Pollution Act. Sale of Foods and Drugs Act. Milk and Dairies Acts, and other legislation as it affects the working of factories and the manufacture and sale of dairy produce.

## Paper 2. Handling and Utilisation of Milk and Milk Products.

Handling of Milk.—Purchase, collection and distribution of milk. Management of milk on arrival at the factory. Weighing, sampling, testing, recording and cleaning. Methods of paying for milk and cream.

Utilisation of Milk.—Methods of dealing with milk for sale for cream production, butter-making, cheese-making and for the manufacture of other products.

Factory Products.—Preparation of cream for market. The manufacture and treatment of butter and cheese. Manufacture of condensed and powdered milk, casein and milk sugar, &c. Ice cream manufacture, &c. The utilisation of by-products.

Pig Keeping.—Feeding and management of pigs. The production of pork and bacon. Bacon curing.

In the opinion of the Committee the Syllabus and the training conditions proposed above indicate the general principles on which the awarding of Diplomas should be based. The Committee do not desire to insist on all the arrangements in detail, but they believe that the subjects mentioned ought to be included in every examination for a Diploma, and the amount of practical training required ought to be regarded as a minimum by all examining Bodies. The Committee

think that it is of great importance that a high standard should be maintained in the more elementary and preparatory scientific examinations.

The Committee desire to place on record their appreciation of the excellent work done by Mr. Alexander Hay, who has acted as their Honorary Secretary. His unfailing courtesy and ready resource in discussing the various questions that have come before them rendered their task comparatively easy.

## (Signed) Ernest Mathews, Chairman.

CHARLES DOUGLAS.

JOHN BENSON.

H. A. D. NEVILLE.

THOS. MILBURN.

A. E. JONES.

R. G. WHITE.

D. R. EDWARDS KER.

R. STENHOUSE WILLIAMS.

J. J. Green. James Mackintosh.

WILLIAM G. R. PATERSON. ALEC TODD.

ALEXANDER HAY, Hon. Secretary.

31st July, 1923.

## EXAMINATION RESULTS, 1925.

- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE SOMERSET FARM INSTITUTE, CANNINGTON; ON MONDAY, TUESDAY, AND WEDNESDAY, MARCH 30th, 31st AND APRIL 1ST
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Mavys M. Arnold, Ellen G. Butler, Dorothy Derrick, Annie Elliott, Dorothy D. Field, Gladys Heal, Ada F. Millard, Emily R. Mitchell, Dorothy A. Reed, Kathleen J. Small, Maud Smith and Florence M. Wyatt.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Dorothy D. Field, Gladys Heal, Edith M. Marsh, Maud Smith and Florence M. Wyatt.
- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, JUNE 22ND, 23RD, 24TH AND 25th.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Nancy L. Baker, Edith M. Barnard, Charles D. Berry, Frank Brown, Linda M. Cookman, E. Crowther Davies, Marian Davies, Gladys Dawson, Eva F. Denny, Henry L. Forbes, Brian G. T. Forsyth, Violet Foulkes, Helen G. Goodman, Mary J. Harris, Roger J. Hillsdon, Kathleen M. Holmes, Doris A. Hunt, Leslie R. Huntley, Beatrice M. Iles, Sybil Kendrick-Lloyd, Phyllis E. Kent, Kenneth J. Kilford, Jessie C. Laidlaw, Margaret Miller, John Milne, Geoffrey W. Minney, Blodwen K. Owen, Edward J. Powell, Henrietta Roberts, John R. Rowling, Mary L. Rugg, Christopher R. Rushton, Barbara C. R. Russell-Smith, Rupert B. Shorter, Leonard A. Smith, Viola C. Stamper, Maurice E. Swabey, Raymond Tamblyn, Clara L. Taylor, Mary E. Todd, Susan M. Usborne, Arthur Wells, Edward B. West, Edith M. L. Wood and Elizabeth A. Yardley.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Charles C. Berry, Violet Blow, Marion Cautley, Linda M. Cookman, Marian Davies, Eva F. Denny, Mary E. Fairfax-Cholmeley, Henry L. Forbes, Brian G. T. Forsyth, Violet Foulkes, Norman A. Gue, Isabel M. Hudson, Beatrice M. Hes, Sybil Kendrick-Lloyd, Jessic G. Laidlaw, John Milne, Geoffrey W. Minney, Blodwen K. Owen, Edward J. Powell, Alaric W. Rowntree, Rupert B. Shorter, Marjorie Summerhill, Raymond Tamblyn, Mary E. Todd, Arthur Wells and Edith M. L. Wood.
- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT STUDLEY COLLEGE, STUDLEY; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 14TH, 15TH AND 16TH.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Margaret A. Hart, Kathleen R. C. Hodgson, Muriel M. Johnston, Ruth Lainé, Mary E. Odgers, Una A. Ridgway, Margaret H. Smith, Diana H. Style, Rosa L. O. Vaux, Kathleen Wigglesworth and Ruth E. Yates.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Greeba Graves, Muriel M. Johnston and Stella M. Peters.

- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE DAIRY DEPARTMENT, COUNTY LABORATORIES, CHELMSFORD; ON TUESDAY, WEDNESDAY AND THURSDAY, JULY 21st, 22nd and 23rd.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to R. J. Fleming, Margaret G. Goody, John Grove, Wallace Haddon, Dorothy Owen, Audrey S. Salanson, Mary J. Salmon, Ronald E. Shine and Richard L. Woodgett.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to R. J. Fleming, John Grove, Wallace Haddon, William F. Heathfield, Dorothy Owen, Audrey S. Salanson, Mary J. Salmon and Richard L. Woodgett.
- EXAMINATION FOR DIPLOMA, BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY AND THURSDAY, SEPTEMBER, 15th, 16th, 17th and 18th.
- A Diploma, with Honours, and Silver Medal for Proficiency in the Science and Practice of Dairying to Laura A. Adlington, Alfred J. G. Clay, Beatrice M. Iles, Jessie C. Laidlaw, John Milne, Olive J. Robison and Rupert B. Shorter.
- A Diploma and Silver Medal for Proficiency in the Science and Practice of Dairying to Charles D. Berry, Violet Blow, Charlotte M. H. Bush, Sarah Campbell, Mollie Davies-Cooke, Isabel J. Day, John Dyson, Mary E. Fairfax-Cholmeley, Henry L. Forbes, Violet Foulkes, Helen Hoggett, Rosamond Jackson, Mary Keedwell, Sybil Kendrick-Lloyd, Bernard R. Llewellyn-Ross, Dorothy A. C. Long, Blodwen K. Owen, Stella M. Peters, Edward J. Powell, Ethel E. Price, Norah K. Shepherd, Mary E. Todd, Arthur Wells and Edith M. L. Wood.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to John W. Hopkins, Florence M. Liddell, Mildred Mallinson and Judith Van Overzee.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Lena R. Ault, Nancy L. Baker, Edward C. Davies, Mary J. Harris, Roger J. Hillsdon, Kathleen Holmes, John W. Hopkins, Doris A. Hunt, Leslie R. Huntley, Florence M. Liddell, Margaret Miller, Christopher R. Rushton, Maurice E. Swabey, Clara L. Taylor and Edward B. West.

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT SOMERSET FARM INSTITUTE, CANNINGTON, MONDAY, TUESDAY, AND WEDNESDAY, MARCH 30th, 31st, and APRIL 1st. 1925.

# EXAMINER: ALEC TODD

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. What is the effect of the following on the milk supply of the country?
  - (a) Steam;
  - (b) Brine Cooling;
  - (c) Pasteurising.
- 2. How would you treat the milk and cream on a small farm where buttermaking is done twice a week?
- 3. What are the chief causes which render milk liable to turn sour?
- 4. State the use, and describe the method of using in testing milk, the following:—Lactometer, Gerber Tester.
- 5. What is meant by ripening cream? How may the rapidity of the process be regulated, and what precautions would you take during its progress in order to obtain the best results?
- 6. Describe the process of the making of Devonshire Cream?
- 7. What utensils would be necessary in a small dairy of 15 cows where cream is sold and butter made?
- 8. What is meant by the expression Butter Ratio? State the percentage of fat in the milk and the approximate butter ratio of Shorthorn milk and Jersey milk.
- 9. Why will an excess of water or casein in butter prevent it from keeping?
- 10. What are the precautions necessary on a farm in order to start a Grade "A" milk supply?

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT SOMERSET FARM INSTITUTE, CANNINGTON, MONDAY, TUESDAY, AND WEDNESDAY, MARCH 30th, 31st, and APRIL 1st, 1925.

# EXAMINER: ALEC TODD.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- Would a Grade "A" Certified supply of milk be beneficial or otherwise to the Cheesemaker?
- 2. In what way could you improve badly tainted milk for cheese-making, and what difficulties would you be up against in the making of cheese from such milk?
- 3. What is the difference in suitability for cheesemaking in the milk of the Shorthorn and Jersey?
- 4. By what means can the acidity of milk be increased so as to bring it into the proper condition for renneting?
- 5. What effect have the following on the making of soft cheese:

  Acidity; weak rennet; too low temperature; too high temperature?
- 6. What is the essential difference in the making of a Cheddar and Caerphilly cheese?
- 7. How would you prepare a starter for daily use?
- 8. Write a short account of the pressing of a Cheddar cheese, stating the weight of pressure used in the process.
- 9. What utensils would be necessary on a thirty-cow dairy farm where the milk is made into cheese?
- 10. What are the causes of the following:-
  - (1) Soft open textured Cheddar?
  - (2) A hard, brittle Caerphilly?
  - (3) A badly cracked pressed cheese?
  - (4) A soft bitter-flavoured blue-veined cheese?

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, JUNE 22ND, 23RD, 24TH, AND 25TH, 1925.

#### EXAMINER:

W. J. GRANT.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. State the reason why milk should be produced and dealt with under absolutely clean conditions.
- 2. Would you consider it desirable to use a starter? If you do, state your reasons.
- 3. What, in your opinion, affects the flavour of butter?
- 4. Is there any material difference between the morning's and evening's milk? If there is any difference, state the cause.
- 5. How would you prepare, and what should be the condition of cream, when you considered it ready to churn?
- 6. Is it necessary to ventilate the churn when churning?
- 7. What is the object in keeping a milk record in connection with a herd of dairy cows? How should such a record be kept?
- 8. Describe a butter worker, its preparation, both for use and afterwards.
- 9. Is there any satisfactory result obtained by washing the grains of butter in the churn?
- 10. What is the chief cause of rancid butter?

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, JUNE 22ND, 23RD, 24TH, AND 25TH, 1925.

#### EXAMINER:

## MISS M. M. MACQUEEN.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. Name the chief breeds of cattle kept for cheesemaking purposes. Which do you prefer, and why?
- 2. Describe some of the taints in cheesemaking which are caused by wrong or careless feeding.
- 3. Describe the action of rennet on milk, and how can this action be hastened or retarded?
- 4. What is the action of salt in cheesemaking? What would be the result of (a) undersalting; (b) oversalting?
- 5. What are the causes of spongy curd? What steps would you take to prevent this trouble, and how would you deal with milk already affected?
- 6. Name the various tests used in cheesemaking? Which do you prefer and why?
- 7. What amount of pressure would you apply to Cheddar cheese, and what is the result when (a) overpressed; (b) underpressed?
- 8. Given 100 lbs. of curd, what percentage of loss usually occurs between vatting and ripening in the case of (a) Cheddar cheese; (b) Stilton cheese?
- 9. Why is a smooth crust preferred on a Cheddar cheese, and a crinkled one on a Stilton cheese?
- 10. What weight of ripe cheese would you expect to get from 100 gals. of milk when made into (a) Cheddar; (b) Caerphilly cheese?

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE STUDLEY COLLEGE, WARWICKSHIRE; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 14th, 15th, and 16th, 1925.

#### EXAMINER:

W. J. GRANT.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. How would you prepare and use a starter in buttermaking?
- 2. In what way can the separated milk from a buttermaking dairy be made use of to the best advantage?
- 3. What causes the ripening of cream?
- 4. Why wash the butter grains in the churn? What are the results obtained by washing and brining?
- 5. Which is the better, thick or thin cream for buttermaking?
- 6. State what, in your opinion, would be the amount of milk given each year from an average Shorthorn, and an average Jersey; with the percentage of fat in each milk.
- 7. What methods would you adopt to produce butter of the best flavour and keeping quality?
- 8. Explain the operation of milking? How many cows should one milker be able to milk regularly? What is the effect of good and bad milking?
- 9. What are the relative values of separated and of skim milk for calf rearing or pig feeding?
- 10. How would you ascertain as to whether milk is tainted or not?

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE STUDLEY COLLEGE, WARWICKSHIRE; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 14th, 15th, and 16th, 1925.

#### EXAMINER:

#### W. J. GRANT.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. What are the general accepted principles of cheesemaking?
- 2. If you are required to make a cheese from milk that is over-ripe, how would you proceed?
- 3. Is it ever necessary to vary the amount of starter-rennet and salt used for cheesemaking? If so, under what conditions?
- 4. Suppose that you have to make a cheese without a starter, how would you proceed (a) when the milk was too sweet, (b) when the milk was too acid?
- 5. What is the average loss of Cheddar cheese in the curing room?

  If higher or lower, give the cause.
- 6. State how you manage the milk to make a Cheddar cheese from the commencement of milking the previous evening till the renneting next morning?
- 7. Does the cutting of curd in any way influence the future in the making of cheese?
- 8. Is the flavour of cheese influenced by the process of milking? If so, how?
- 9. Describe the making of any *one* of the following varieties of cheese: Cheddar, Cheshire, Stilton, or Wensleydale.
- 10. Describe the texture, flavour and colour, when ripe, of the kind you have selected in the previous question.

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE DAIRY DEPARTMENT, COUNTY LABORATORIES, CHELMSFORD; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 21st, 22nd, and 23rd, 1925.

## EXAMINER: ALEC TODD.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. What amount of milk and average percentage of fat would you expect to get per annum from the following individual cows:—Shorthorn, Friesian, Ayrshire, Jersey, Kerry?
- 2. What is meant by the term Butter Ratio, and how could you work it out?
- 3. How would you set about producing Grade "A" milk on an ordinary farm?
- 4. Why is cream ripened for buttermaking, and what is the advantage in doing so?
- 5. How would you prepare cream, and Devonshire cream for market?
- 6. To what use would you put the following:—Lactometer, Creamometer, Pipette, Butter-worker, Separator.
- 7. How would you treat butter that you wish to keep for three months?
- 8. What profitable use can separated milk and buttermilk be put to?
- 9. What is the effect of the following on the milk supply of the country:—(1) Steam; (2) Brine Cooling; (3) Pasteurising?
- 10. What influences the keeping qualities of butter? Why is farm-house butter so often very bad?

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE DAIRY DEPARTMENT, COUNTY LABORATORIES, CHELMSFORD; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 21st, 22nd, and 23rd, 1925.

#### EXAMINER: ALEC TODD.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. How far is successful cheesemaking dependent on the quality and pureness of the milk used?
- 2. What are the necessary tests that you would apply during the day in a cheesemaking dairy?
- 3. Why is over-acid milk so difficult to handle either for cheesemaking or buttermaking?
- 4. Why does milk coagulate when rennet is added to it? What hastens or retards this action?
- 5. What precautions would you take in treating milk for soft cheese-making? Is it as important as in hard cheesemaking that the acidity before renneting be of a definite amount?
- 6. What is the effect of using either too much or too little starter in cheesemaking?
- 7. What is the meaning of the following terms:—Soda Test. Rennet Test. Fermentation Test. Hot Iron Test?
- 8. What would most influence the ripening of a Cheddar and Wensley-dale cheese?
- 9. What do you consider a reasonable time to press a Cheddar and Derby cheese, and what amount of weight would you use; also state the effect of under-pressing?
- 10. Compare the ripening of hard-pressed cheese in :-
  - (a) Temperature of  $60^{\circ}$  F.
  - (b) " 75° F.
  - (c) Cold Store.

EXAMINATION FOR DIPLOMA AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 14TH, 15TH, 16TH, AND 17TH, 1925.

#### EXAMINER:

## T. J. DRAKELEY, Ph.D., F.I.C., F.C.S.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

### QUESTIONS.

#### CHEMISTRY.

- 1. Describe the construction of a hygrometer. How is the humidity of the air determined by its use? Of what importance is the result obtained in the store-room for hard cheeses?
- 2. Describe in detail the method you would adopt for the analysis of a sample of thick cream. If you suspected the presence of boric acid, what qualitative test could be applied?
- 3. How are the following acids prepared:—Carbonic acid, lactic acid, acetic acid, sulphuric acid? Briefly indicate their properties.
- 4. Write a short essay on one of the following:—(a) the barometer, (b) acidity in cheese-making, (c) nitrogen. (d) milk powders.

#### BACTERIOLOGY.

- 5. What bacteriological standards for milk have been adopted in this country? How may the contamination of milk by dirt organisms be detected?
- 6. Milk has been allowed to stand for one day in four glass bottles. One bottle is then washed with cold water, the next with soapy hot water, the third is washed and sterilised with steam, whilst the fourth is left unwashed. By what simple test would you demonstrate the relative cleanliness of the bottles; what result would you expect, and why?
- 7. How are commercial "starters" prepared, and used in the dairy? Why are starters required?
- 8. Write a short account of the influence of temperature on the multiplication of bacteria, and briefly indicate the importance of this subject in Dairying.

EXAMINATION FOR DIPLOMA AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 14th, 15th, 16th, and 17th, 1925.

#### EXAMINERS:

T. J. DRAKELEY, Ph.D., F.I.C., F.C.S., and W. BURKITT, B.Sc.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined riva roce.

## DAIRY FARMING QUESTIONS.

- 1. What points would you take into consideration in choosing a dairy farm?
- 2. Describe systems of book-keeping which you could recommend:-
  - (a) For a milk-selling farm.
  - (b) For a cheese or buttermaking farm.
- 3. What are the arguments for and against the dual-purpose cow?
- 4. Discuss fully the use of brewer's grains for feeding dairy cows.
- 5. What do you consider are the essential implements for securing a crop of hay? What other implements could be, and often are, used on large well-equipped farms?
- 6. On a dairy farm of 200 acres, of which 120 acres are under grass, what stock of various kinds do you think would be necessary?
- 7. What place should poultry take on a well-managed dairy farm? Describe the system of management you would adopt, the numbers you would keep, and their probable yields.
- 8. In many parts of England there will be a scarcity of roots for the winter feeding of cows. How would you get over this difficulty, what substitutes might be used, and how would they compare in cost to mangolds or swedes?
- 9. Give the average yield of milk and its composition for all the British Dairy Breeds of cattle.
- 10. What new Dairying Laws and Regulations come into force this year?

EXAMINATION FOR DIPLOMA AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 14TH, 15TH, 16TH, AND 17TH, 1925.

EXAMINERS: T. J. DRAKELEY, Ph.D., F.I.C., F.C.S., W. BURKITT, B.Sc., and MISS M. M. MACQUEEN.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and answers to Questions 1 to 5 should be fastened together in order in the left-hand corner. Answers to Questions 6 to 11 should be treated in the same way. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

#### DAIRYING QUESTIONS.

- 1. State the conditions you would insert in agreements with farmers when purchasing milk for cheesemaking. What tests would you employ to see if these conditions were observed?
- 2. What points should be considered when purchasing curd knives, milk churns, cheese moulds, presses and shelves for curing for a large Cheddar cheese dairy?
- 3. Describe the characteristics of good
  - (a) Cheddar cheese.
  - (b) Stilton cheese.

What are the chief faults in either variety, and how may these be avoided?

- 4. State what you consider the most essential points to be observed when building a curing room for cheese?
- 5. What do you consider the most advantageous method of whey disposal from a dairy dealing with 1,000 gallons daily, and what would be the probable financial return of same?
- 6. Describe the best and most economical methods of cooling milk on a farm where there is a good supply of water, and also where such a supply is not available.
- 7. What are the advantages and disadvantages of equal and unequal periods of milking?
- 8. Enumerate the bye-products of a dairy farm, and state how you would utilise them.
- 9. How would you test milk for a dirt at a factory?
- 10. Give a full description of the manufacture of clotted cream.
- 11. Describe fully the causes which affect the composition of milk.

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 14TH, 15TH, 16TH, AND 17TH, 1925.

#### EXAMINER:

## W. BURKITT, B.Sc.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. What method would you adopt for testing the acidity of cream? Give what you consider are the standards of acidity for ripe, fresh and over-ripe cream.
- 2. What percentage of butter fat is found in :-
  - (a) Separated milk,
  - (b) Skim-milk,
  - (c) Buttermilk,
  - (d) Fresh milk from Channel Island cows?
- 3. Give the points of a perfect sample of butter.
- 4. Why do you churn cream? What points should be observed in the operation of churning?
- 5. What is colostrum? Give its analysis and characteristics. How soon after calving may milk be used for sale as fresh milk, and for buttermaking? Give your reasons for the time stated.
- 6. Compare the advantages and disadvantages of separating with the shallow pan method of cream raising.
- 7. Describe and compare the various methods of testing milk for butter fat.
- 8. If most of your butter was sent away by post, how would you prepare and pack it to get the best results?
- 9. When milk sours what changes take place? How can souring be accelerated or retarded?
- 10. In what way may the colour of butter be affected, both beneficially and injuriously?

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 14th, 15th, 16th, and 17th, 1925.

## EXAMINER: MISS M. M. MACQUEEN.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. Give difference in composition of milk from Shorthorn, Jersey, British Friesian, and Ayrshire cows. Which would you select for cheesemaking, and why?
- 2. What would be the result of using colostrum in cheesemaking? How would you judge when the milk of a newly-calved cow is fit for use in cheesemaking?
- 3. What is rennet? How would you test its suitability for cheese-making, and how would you store it?
- 4. What are the advantages of using a "starter" in cheesemaking?
- 5. Give the percentages of acidity you prefer at various stages in making:— (a) Cheddar cheese.
  - (b) Cheshire cheese.
  - (c) Derby cheese.
- 6. What effect has temperature on cheesemaking? Give the different temperatures you would prefer at various stages in making:— (a) Cheddar cheese.
  - (b) Cheshire cheese.
  - (c) Derby cheese.
- 7. When making a quick ripening cheese, and a slow ripening one, what different conditions are required?
- 8. What result would you expect if curd were vatted up with too low a percentage of acidity?
- 9. Describe the process you would follow, and precautions necessary, to obtain a good crust on Cheddar cheese.
- 10. Give the average composition of :-
  - (a) Cheddar cheese.
  - (b) Wensleydale cheese.

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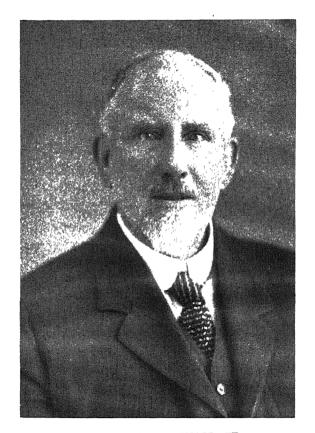
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The late B. RAVENSCROFT.

### MEMOIR OF THE LATE B. RAVENSCROFT.

The close of the year 1926 brought to the Association a sad loss, the death of one of its oldest members, and at the same time valued servant, the late Mr. B. Ravenscroft.

For many weeks our late Secretary had been affected by heart trouble the least exertion causing him great difficulty in getting his breath. In spite of this the arduous duties previous to and during the last Dairy Show were carried out with scarcely a break. It was only on the closing day, or more correctly the day following—Saturday, that on returning home, complications set in which confined him to his bed and eventually caused his death on the 13th December.

Birkbeck Ravenscroft, who had been a more or less close friend of the present writer for upwards of forty-six years, was born in 1857, being the eldest of the three sons of the late Francis Ravenscroft, the founder and for many years Manager of the once popular Birkbeck Bank, an outcome of the Birkbeck Building Society established in 1851.

Birkbeck finished his education at Rugby where he made many

friends, and very quickly gained a place in the 1st XV.

My first acquaintance with the subject of this memoir was brought about through our mutual interest in goat breeding, and almost from the first my friend was among the prominent members of the British Goat Society. At the time of our meeting he was residing with his parents in St. John's Wood and held a minor post in the bank with which his name was associated. Later on he

advanced to the position of Assistant Manager.

Mr. Ravenscroft at that period was residing at The Noke, Bricket Wood, half way between St. Albans and Watford, and his father having died a wealthy man some few years previous, he was enjoying very comfortable circumstances. Possessed of strong sporting proclivities he was now able to indulge more freely in his favourite pastime—riding to hounds, becoming a regular attendant at the meets of the local pack of harriers of which a few years later he was offered, and accepted, the Mastership. Here he was also able to extend—which he did largely—his herd of goats, while to these he added a few Jersey cows and thus began his connection with Dairy Farming.

Unfortunately our friend's financial resources became unequal to the heavy calls on his purse which his various pursuits occasioned. Money troubles presented themselves which necessitated leaving the Noke with its acres of land, kennels and stables, and returning

to a more modest residence and ménage.

In the early part of the war Ravenscroft was residing at Deal, and we saw much less of each other than previously, but a circumstance occurred in 1917 which brought him back to reside in the outskirts of London—Richmond, to be precise. I must now revert to what more closely concerns our late Secretary's early connection with the Association.

It was while I was myself holding the post of Honorary Secretary that I got my friend to join—which he did in 1881.

Shortly after this he was made Honorary Auditor, a post for which his experience in the Bank well qualified him. In 1907 he was elected a member of the Council.

Mr. Ravenscroft's first connection with the Dairy Shows was as steward of the goats, figuring in this capacity from 1902 to 1905. Three years later he was appointed to help the writer as joint steward of Finance, where again his services proved very acceptable.

The outbreak of war caused the Dairy Shows to cease after 1915 and until 1919, and this had a serious effect on the Society's finances. It was during this interval that the event alluded to above in 1917 occurred. The secretaryship became suddenly vacant and there was much difficulty in finding someone suitable to carry on the work.

Mr. Ravenscroft came forward and offered his services, which were gratefully accepted, and his appointment as Secretary took place in February of that year. It will, I think, be readily accorded that during these nearly ten years our late friend discharged the duties of his office in an able and highly satisfactory manner, especially during those long and busy hours at the Agricultural Hall each October. It was here, it seems to me, that his qualities shone to the best advantage. Only those who have had personal experience on such occasions can fully appreciate how patience, tact and temper are tried throughout the day. This official is expected to be available at any moment, and to have an answer to every question. Writing from my own observation during these many years our friend never appeared flustered, and very rarely put out, or annoyed. One enquirer would follow another in a regular queue, and all received courtesy and help when it could be given. Attributes such as these conduce to popularity, and that our late Secretary was very popular no one, I feel sure, will deny.

There was one prominent feature in Mr. Ravenscroft's activities which all members of the Council must have recognised—his whole hearted interest in the welfare of the Association. With him it was the British Dairy Farmers' Association first, last and all the time. He threw all his energies into the Dairy Show each year with the object of increasing the invested capital, and this he most certainly achieved. His loss will be long felt and by many deplored.

# A FORAGE CROP SYSTEM FOR DAIRY FARMERS: A WAY TO CHEAPER PRODUCTION.

By James C. Brown.

#### PRIZE ESSAY.

In is common knowledge that in many countries arable forage crops are employed by stock raisers to a much greater extent than by the farmers of this country, and the recent Report of the Imperial Economic Committee calls attention to the increased output of farm produce which can be secured by the greater use and by the improvement of these crops. The unprofitable condition of grain growing. on average land, has resulted in a large area of land being laid to grass. That the occupiers of this new grassland have turned to cow-keeping and milk production as a possible means of solving the problem of winning a profit from their farms is shown by the increase in the number of dairy cows disclosed by the annual returns. A consequence of this change over from grain to milk production is that, at the present moment, the milk market is glutted and there is no indication of such expansion in consumption as would absorb the increased production. It is, therefore, worthy of consideration whether the practice. now common, of purchasing large quantities of costly feeding stuffs in order to produce additional quantities of liquid milk for which a market does not exist is a wise one. On the average, home-grown grain is less expensive per nutrient unit than purchased foods, and the unit in rough foods is much cheaper to produce. Here, then, is the foundation of a policy of cheaper production. An examination of any dairy farmer's accounts reveals two outstanding items of expenditure—feeding stuffs and labour—and investigation leads to the conclusion that it is in the lowering of these costs that the milk producers most hopeful prospect lies. A smaller number of cattle more completely provided for by the farm itself. It is an accepted fact that to-day the farmer's purchases are made at a much higher rate than he receives for what he has to sell, therefore he must profit by making his farm, to the greatest possible extent, self-supporting. It is unnecessary to stress the importance of high-yield cows, these of course pay well for purchased foods, even at high prices, but it is quite easy to attach too much importance to high yield in considering the position of the average dairy farmer. For many years to come really high producing cow must form a very small percentage of the national herd; they are difficult to buy and not too easy to breed. It is with the average cow that the majority of dairy farmers are concerned and, in her case, economy in feeding is of prime importance in inducing her to leave a profit. By economy it seems likely that some farmers win a little profit, even from cows whose yield is below the average. At the

present time liquid milk sells for approximately 40 per cent. more than its value by comparison with oversea dairy produce, and it is probable that the future will see this margin narrowed, although to those not working under favourable conditions of situation and soil. the present prices give little in the way of profit and may even leave the balance on the wrong side. Any further fall in the wholesale price must tend to eliminate those who are not advantageously situated for the production of milk. Cost investigations show that, given uniform management, the cost of production varies greatly, influenced by factors which are not under the farmer's control. advantages of the foreign raiser of dairy products are less obvious than those of the corn grower, but cheap pasturage and feeding stuffs are among the most important. The grazing of cattle out of doors all the year round is a further means of reducing costs. Peculiarly favourable soil conditions under which stock naturally thrive well operate in favour of some oversea competitors. Nature has made soils, on which all organic life depends infinitely variable in chemical and physical make up. Climate is equally diverse in its influence on the farming industry and difference in the character of the seasons may affect the financial aspect of the dairy farmer's operations. Variations between district and district and even between different farms often have an important bearing on the success of the dairy The natural character of his land is still the chief factor in farmer. determining the success or failure of the farmer's business, despite the aid which science has brought to bear on the various branches of his occupation. The farmer who is fortunate enough to occupy land which will yield, without artificial aid, a 60-bushel crop of wheat or fatten a bullock to the acre, without the use of purchased foods, has a lead over him whose land needs generous help to give average returns. Moreover, certain farms are naturally unhealthy for livestock, the reasons for which are not known. The farmer's raw material varies to a much greater extent than that of the manufacturer whose conditions of production are under control and can be rendered uniform. This fact is often overlooked by those who give advice to the farming community. Mr. Henry Ford advises the dairy farmers of a district to pool their stocks in a great centralised business providing ideal conditions in which the animals would be fed cleaned and milked by the aid of electricity, but no mention is made of the electric conveyors which such a concentration would render necessary to carry so large a herd to distant pastures, to bring food from far-away fields, and to carry back the manure. It would appear that the saving effected in one direction would be more than lost in another—a common experience in efforts to improve farming practice. Although the labour involved in the care of dairy stock is much greater than in other farm animals, it is the cost of food which is the most important factor influencing the cost of milk production. The scheme of the Wiltshire farmer who takes his cows to their food all the year round and leaves the manure where it is made and needed, is more promising than that of the motor magnate, eliminating as it does much of the direct labour demanded in the ordinary way of cow-keeping. Food absorbs about 75 per cent. of the cost of producing a gallon of milk and, therefore, chiefly influences the total cost. Expensive feeding quickly absorbs the saving resulting from labour economies and of labour-saving machinery.

The business of the stockbreeder is founded on the herbage of the land, and its capacity to make growth, meat or milk chiefly determines the success or otherwise of his undertaking. When these have to be secured largely by the use of purchased concentrates his chances of success are greatly reduced. Purchased foodstuffs, at existing prices. can only be profitably employed when they are used for the purpose of balancing home-grown fodder. The quantity and quality of the rough fodder produced on the farm is, therefore, a matter of great importance. The same species of plant may have very different values. according to the nature of the soil on which it is grown. The best fattening pastures do not, as a rule, differ conspicuously in botanical composition from others of comparatively inferior quality. The difference in the grazing value of land of similar general appearance is rarely exposed by chemical analysis and the cause has long baffled investigators. The greater feeding value of oat straw and swedes in the North of England as compared with the South is equally puzzling. but little difference being shown by analysis. During the past half century much pasture land has been greatly improved in grazing value by the use of basic slag and other phosphate manures, and by the extended use of lime, which, no doubt, improves the quality in addition to increasing the quantity of the grass herbage, but has its chief use in causing the growth of an abundance of white clover, a plant whose grazing value is unexcelled, its chief drawback being its small yield and short-growing season. The encouragement of this plant is one of the most important advances made in stock farming in recent years; in many cases its development in pastures has more than doubled their grazing value.

Pastured grass of good quality is the most economical food available to the stock farmer, the animals gathering it themselves without the expenditure of human labour. When, however, grass is made into hay the cost per nutrient unit is increased by the labour expended on it in the process, and again in feeding; the cost of handling the manure may also have to be added. Except where grassland is of unusual quality, rough fodder can be produced on arable land at a lower cost, and in much greater quantity, than by the permanent grass hay crop. The summer grazing period also is not uniform, in certain districts grass makes abundant growth during the whole grazing season, but over a much wider region both the quantity produced and the feeding value falls off rapidly after mid-July, resulting in the case of milch cows, in a rapid decline in the milk yield. No doubt a similar falling off takes place in growth and weight increase in other animals, but in their case it is not so readily noticed. A striking difference is seen

in cows kept indoors during the summer months, the output of milk being much steadier. It is always a difficult matter to maintain a steady flow of milk during the summer months: in this respect winter management offers less difficulty.

In bad grass years, even a considerable allowance of concentrated feed, will not keep up the yield to a proper level. It would be an obvious benefit to the dairy farmer if the succulent food of the cow could be kept at a uniformly high level of quality throughout the summer period. The question, therefore, arises as to whether a purely grassland farm is best suited to the requirements of the dairy farmer. Permanent grass is slow to start growth in the spring by comparison with suitable temporary grass and the period of really high productivity is, on average grassland, short. A temporary pasture, in which wild white clover is a dominant constituent, if well supported by mineral manures, is specially suited to the needs of the dairy cow and is preferred by her to old established grass. Moreover, such grass is storing fertility in the soil in such a manner as to make possible a profitable cereal crop when the land is again brought under the plough. Even at present prices, in relation to labour costs, grain crops are profitable if the yields be high enough. This is a much more effective method of raising the yield than is direct manuring. British arable farming is bound by tradition to the four-course system—not long ago it was the custom to insert a clause in leases reserving complete adherence to this system. It is questionable, in the present circumstances, whether the old system, in spite of its obvious merits, offers the best means of obtaining economic returns from arable land. The greatest possible production of food from the land may interest the nation in the not distant future, but the farmer of to-day is concerned with the problem of earning a profitable return, and 20 per cent. of profitable corn land, therefore, is preferable to 50 per cent. which is barely paying expenses. The four course plan does not, on average land, maintain the humus content of the soil at a level which will give high yields of grain; under this system the effect of artificial manures on the yield is strictly limited and a point is soon reached beyond which it is not profitable to force the yield. When land has been in grass several years one or two grain crops may be obtained in which the yield is good enough to leave a profit. It may well be that in addition to his natural and commercial advantages, the oversea producer is evolving a more economical system of farming than the established system which flourishes in Britain. The system practised in the Argentine is worthy of study by British farmers as it is based on sound principles and secures the maximum economy of labour with high production. It is founded on the lucerne crop, which grows luxuriantly in that country, and is a simple alternation of this crop with cereals, each crop being an excellent preparation for the other. Lucerne is one of the most nutritious forms of fodder and the crop is one of the best means of enriching the land for a grain crop.

Leguminous crops form the best foundation for a new system of farming arable land in which stock products are the chief object. The value of these crops has been grasped by the farmers of the United States to a greater degree than by British agriculturists, the area under lucerne doubling in that country each decade since 1890, while other leguminous forage crops are being grown in increasing quantities. In one state land is said to have increased in value by 90 per cent. in six years owing to the rapid extension of the use of this crop.

Leguminous crops call for the special attention of stock farmers because of their high protein content and the large percentage of mineral matter they contain. Unfortunately, it is not possible for the farmers of this country to follow exactly the American plan of relying mainly on the lucerne crop because it does not succeed generally in this country, which is indicated by the fact that, while the world area under this crop is rapidly extending, in England it is actually shrinking. Probably strains could be raised which would flourish under British conditions. The first attempts to grow the crop in the United States were attended by failure. Experience has shown that it is in finding a suitable type for particular conditions which is important, and that it is of little use trying, by artificial measures. to adapt land to the crop. The reasons for its failure in Britain are not understood. Sometimes, on quite a small plot, which gives uniform yields of other crops, lucerne will vary between complete failure and a luxuriant growth; a deep, dry subsoil is one of the conditions of success. Apart from the lucerne crop there are several nativeleguminous crops, which offer distinct promise of making useful substitutes for this important crop which it has been claimed equals wheat in its potential value to the human race. It has to be admitted, however, that at the present time, there is no crop which can be grown in this country which is quite the equivalent of lucerne where it thrives naturally and may yield six tons of hay per acre. A considerable number of more or less suitable leguminous crops can be grown, including red clover, alsoke, vetches, sainfoin, kidney vetch, peas and beans.

As a grazing plant white clover gives the nearest approach to the use of lucerne abroad and it is not difficult to visualise the benefits a crop equal in feeding value and capable of producing the yield of lucerne would confer on British agriculture. Legume hays are particularly useful to the dairy farmer in maintaining the health of his stock and in reducing his feeding costs. The vetch crop is one of the most commonly used in this country as a hay crop, the clovers being most frequently mixed with grasses which impair their special feeding value. Hay from field peas cut in the early flowering stage, is equal in quality to lucerne hay, but is somewhat more difficult to make. A hardy variety of pea which can be sown in January will give a good yield of hay if cut just after flowering commences and will

afterwards give an aftermath of equal weight. Sainfoin, where the land is suitable for the crop, makes excellent hay and trifolium may be used in special circumstances. Two points of vital importance in the making of legume hay are that cutting shall take place in the early flowering stage and that the leaf shall be preserved. The dried leaves of the lucerne plant which may reach 50 per cent. of the total crop contain 17·3 per cent. of protein and 3 per cent. of fat, the stems 1·8 per cent. and ·4 per cent., respectively. There can be little doubt that a much greater use of these hays would operate to the advantage of dairy farmers.

A comparatively recently introduced forage crop promises not only to increase the stock carrying capacity of land, but at the same time to be a means of reducing the cost of winter feeding. Marrowstem kale holds a position, so far as composition is concerned, midway between roots and grass and its average vield of nutrients per acre is perhaps the highest of all British crops. This crop is much less costly to grow than roots, as it needs more simple soil preparation. The root crop is expensive and uncertain and contains a high percentage of water, but is peculiarly suited to the four course system of farming. in that it gives opportunity for cleaning the land and enables the straw to be turned into manure by which soil fertility is restored. In recent years this method of farming has become expensive. Farmyard manure produced in this manner is now too costly in view of the relatively low price of the farmer's produce. The marrowstem kale crop can be employed in a different way as it will grow year after year on the same land and needs much less cultivation than root crops owing to its vigorous root system and its rapid growth. Its nutritive value is approximately 50 per cent. higher than roots and it contains several times as much mineral matter. Marrowstem kale can be grown under average conditions at a cost of 6d. per cwt. It does not need the costly preliminary cultivation demanded by the root crop unless the land be very foul. It thrives best when given the same preliminary cultivation which the cereal crops receive, top dressing with nitrogenous manures being the most important factor in achieving success. The crop is very resistant to frost and is rarely damaged by it and it is not dangerous to the health of stock to feed it when frozen, whereas, mangels which have been frosted are never again fit to give to stock even after the frost has completely gone from the bulbs. Marrowstem kale can be fed from early September until the end of February. It is a suitable fodder for all kinds of farm stock and combines well with legume hay; the writer has obtained good yields from this combination with an expenditure on concentrated foods which would surprise most dairy cow-keepers. It has a higher dry matter content than roots and far exceeds them in mineral matter and protein; 84 lb. contains nutrition sufficient to form the maintenance ration of a full sized dairy cow with an excess of protein and a deficiency of dry matter. In the case of a cow yielding four gallons of milk daily. 84 lb. of kale and 14 lb. of a milk production mixture compounded with the composition and character of the kale crop in mind, raises the total dry matter to the required amount and provides for all the needs of such a cow. The \(\frac{3}{4}\)-cwt. of kale costs 4\(\frac{1}{3}\)d. and this combination, therefore, makes a very economical plan of feeding, although hay or straw is eliminated entirely. So far as chemical composition is concerned the above ration closely approximates grass at its best. Mr. Bond gives an example of a cow yielding daily 10 gallons of milk fed on similar lines. Marrowstem kale makes a very successful combination with legume hav. Recent experiments carried out in America have shown that well won legume hav can be made to replace about 75 per cent. of the concentrates commonly used without affecting the vield of average cows-14 lb. of lucerne hay replacing 8.5 lb. of concentrated foods and thereby effecting a daily saving of about 4d. in the cost of food per cow. For cows giving three gallons daily the following ration is suggested as effecting a considerable saving on standard practice:-

 Marrowstem kale
 ...
 50 lb.

 Legume hay
 ...
 ...
 20 "

 Maize meal
 ...
 ...
 3 ...

For further gallons a balanced milk production mixture would be fed in addition in the usual way. As both kale and the legume hay are high in lime content all the requirements of a complete ration are met. The legume hay-marrowstem kale combination is also particularly suited for feeding growing stock, having a narrow nutritive ratio.

Home-grown concentrated foods are, on the average, cheaper than those purchased and a good supply of these foods tends to keep the imported article down to a reasonable level of price. There is, therefore, a clear advantage in employing some of the land now being laid to grass for the purpose of supplying a part of the needs of the livestock in this respect. Protein-rich concentrates are most needed by the dairy farmer and are the most costly to buy. It is possible to produce advantageously a proportion of what is needed on the farm. For this purpose no crop is more suitable than a mixture of beans, peas and oats or beans, vetches, oats and barley; the former mixture should be sown in January or February, the latter in October or November. The straw of the mixed crop makes useful rough fodder and, in combination with marrowstem kale, makes a perfectly satisfactory maintenance ration for dairy cows fed as follows, without chaffing:—

Beans, peas and oat straw ... 12 lb. Beans, peas and oat grain ...  $2\frac{1}{2}$  , Marrowstem kale ... 50 ,

The mixture crops have several advantages over pure cereals: in the first place they give, on average and weaker soils, a much heavier

vield of grain and straw. On land not too weedy these crops can be grown several years in succession with success, in fact the yield often increases rather than diminishes with the number of crops. dense canopy formed by the crop keeps down weeds, and under favourable conditions, most weeds can be actually killed out by the smothering effect. Owing to the proportion of leguminous plants these mixtures contain they make a suitable preparation for the cereal crops. The autumn sown crop is resistant to drought and if the pastures become parched at midsummer it can be used as green fodder to carry the stock over the period of scarcity. These mixtures are very cheap to grow and are amongst the most reliable of farm crops. They are harvested with the binder and are threshed and ground with the usual machinery. The meal is well suited to form about 50 per cent, of milk production mixtures. The crop should be cut somewhat unripe and allowed to ripen out in the stock when the straw has a value approaching that of hay.

The outstanding characteristic of the grazing season is the great advance in thriftiness of all farm stock and the abundant flow of milk which takes place with the coming of the young grass in the spring. Recent experiments have tended to suggest that it is possible to secure a uniform output from grass during the whole grazing season, common experience is that growth increases rapidly during the early summer and then falls off equally rapidly after the zenith is passed. The period of high production is often short, and should the months of June and July be dry a rapid decline in the yield of milk takes place: this decline is generally much steeper than is justified by the influence of advancing lactation. There is probably a tendency in cows at this period to store up fat in anticipation of winter at the expense of milk production. However, cows kept indoors during the summer months show the same steadiness of yield which characterises winter production and that the freshness of the fodder has an important influence on the milk flow is shown by the rise in yield which follows the turning of cows into a good aftermath. An ample supply of fresh green fodder is needed to keep down expenditure on concentrated foods. Close grazing of pastures is sometimes recommended in order to keep the herbage fresh but this practice is accompanied by a progressive falling off in yield as the season advances and especially so during a dry spell. Succulent fodder can be obtained by growing suitable crops on arable land. Such crops are generally found to be less costly than making up the deficiency of the pastures by feeding concentrates. The cost of cutting and hauling the crops to the cows is an obstacle involving, as it does, a considerable expenditure on labour. What is required is a high yielding arable crop of suitable character, which is hardy enough to permit of pasturing, into which cows may be turned for a short time each day, thus saving the expense of cutting and hauling. In from one to two hours, cows will consume a full ration.

When the ground is firm the crop is not seriously wasted by

grazing in this manner. The following mixture may be tried experimentally for the purpose:—

 Bokhara Clover
 ...
 ...
 15 lb. per acre.

 Alsyke
 ...
 ...
 6 ,, ,,

 White Clover
 ...
 ...
 1 ,, ,,

 Wild Trefoil
 ...
 ...
 3 ,, ,,

Bokhara clover is a large growing leguminous plant, which, if consumed before the flowering period is much advanced, has a chemical composition identical with that of lucerne. After the flowering period it rapidly becomes woody and unpalatable. Wild trefoil is a smaller plant than the commercial kind, but rapidly covers the ground and gives, in a short time, much the same kind of herbage as white clover in a permanent pasture. The mixture should be sown as early as possible in the spring, when, by August it will give a dense growth of nutritious fodder. The second year's growth may be cut twice for hay or, once for hay, and once grazed as in the first year. Care is necessary in bringing cows from a bare pasture on to the crop as there is a possible danger of their becoming blown when the leaves are wet. As the crop consists entirely of legumes its high protein content should be borne in mind when supplementing it with concentrates.

The plan outlined above involves the use, in the raising of dairy products, of a considerable proportion of arable land, a system which has been proved to be effective by the Danes. The advantages of the system are: (a) an increased output from the land; (b) reduced cost of feeding; (c) the curtailing of expenditure on purchased feeding stuffs: (d) the fertilising and amelioration of the land through the agency of leguminous crops; (e) the production of profitable cereal crops: (f) the use of temporary pasture with herbage under control and free from the taint of animal diseases. The details of the cropping need adjustment to the peculiar conditions of each farm as the objects aimed at can be achieved in many different ways. It is a question whether the reverence in which permanent grass land is held is justified. That there is a large area of land in this country which gives its best service when employed as permanent pasture cannot be denied, but it is also true that a much greater extent produces little by comparison with what it is capable of under the plough. Measured in digestible nutrients average land, under the plough, is three to four times as productive as grass land, the problem is how to convert the increase without incurring expenses which outweigh the benefits of higher production. It has been noted that other countries have been able to solve this problem, but it is doubtful if their methods, in detail, can be practiced with success here. In this country it is clear that an arable system of farming livestock must include temporary pasture, but such pasture need not necessarily be confined to the type which is common at the present time. The value of temporary pasture has been greatly enhanced since the discovery of the special virtues

of wild white clover. It is easy to visualise the advantages which would accrue to British agriculture were a large growing reliable leguminous plant of the nutritious character of white clover and as productive as the American alfalfa available for cultivation in this country.

What could be accomplished by such a crop is indicated by what has been achieved in other lands. The scheme suggested is an inversion of the traditional arable practice in which stock-keeping is an adjunct to grain growing. The new plan takes cognisance of the fact that while the price of bread has remained stationary during the past 200 years the price of meat and other animal products has advanced from three to four times. It is the opinion of economists that this tendency must continue, therefore, grain growing must yield its time honoured position in this country to stock farming and arable land must provide primarily for the needs of the livestock while grain production is confined to that land which will produce high yields.

## DAIRY FARMING IN FRIESLAND.

By R. Weatherali.

General—It is remarkable that the two foremost dairy farming countries in the world—Denmark and Holland—are both small, and are singularly devoid of mineral and industrial wealth. It is still more remarkable that each has had to face the fierce competition of cheap food supplies from the New World during the last half century without any effective system of fiscal protection, and that in each agricultural development has depended mainly on the activities of the farmers themselves, mainly through co-operative efforts, unhampered by the clumsy assistance of wealthy governments, and away from the disturbing influence of party politics.

In quality of stock, crops, and produce, in soil fertility, in the application of new scientific methods, and in marketing organisations for agricultural produce these two countries are about equally advanced and compare favourably in all these respects with any other country in the world. Specialisation and development in dairy farming in both these countries has reached a very advanced stage; in many respects very similar, in others showing striking differences. Denmark about nine-tenths of the land is under the plough, bacon is nearly as important as butter, and most of the export trade is done with England. Holland, on the other hand, still remains a grassland country, bacon is relatively unimportant, and cheese is one of the largest items in the export trade, most of which is done with Germany. This last point may help to explain why so little is heard in England about Dutch farming, in comparison with Danish, although Holland is actually more accessible than Denmark, and its agriculture exhibits features more resembling our own than anything found in Denmark.

In Denmark the system of agriculture in common practice is almost exactly the same in all parts of the country, but in Holland different conditions have produced strikingly different types of farming in different parts of the country. Bulb growing around Haarlem, market gardening at various centres, arable farming in Groningen and the potato-starch industry around Veendam, all represent systems of agriculture which are very highly organised and well worthy of attention, but as a whole the dominant system of agriculture is dairy farming, based on grassland, and is most highly developed in the province of Friesland around the town of Leeuwarden. The following account

deals only with farming in Friesland, except where other parts are mentioned for purposes of comparison.

Friesland forms the north-western part of Holland and is a province about as large as Wiltshire or rather less than Kent. It is entirely an agricultural province and the only town of considerable size is Leeuwarden, which is the centre of all local agricultural activities and is one of the largest cattle markets in Europe. The climate is very similar to that in England, perhaps a little cooler in summer, and certainly more trying in winter. The absence of high ground leaves the land exposed to winds from all directions and compels farmers to house their stock in winter more carefully than is necessary here. The soil as a whole is distinctly fertile, but varies in nature from clay to fenland peat. The most fertile part of the province is supposed to be the belt of clay, containing a fair leavening of humus, which runs in a south-westerly direction from Leeuwarden. This is the area which is supposed to supply the best Friesian cattle, and many of the famous Dutch breeders of these animals have their farms within it.

One of the most serious national problems in Holland at the present time is the very rapid increase in population in a country which already shows serious signs of overcrowding and where opportunities for further expansion in the means of sustenance are very small. increase has a great influence on the price and rent of land, it helps to explain the high state of fertility of the soil through artificial improvements, and the energy which is being thrown into the reclamation of marshes and heaths. £4 and £5 per acre represent average rents for fair agricultural land in Friesland, and for really good land the rent is considerably higher. The selling price of land is correspondingly high, and varies between about £70 and £100 per acre for what is considered land of average quality with buildings included. Such high rents are a very serious tax on the productive capacity of the soil and its ability to yield a profitable return to tenant farmers. An elementary knowledge of economics is sufficient to make one realise that when land is as dear as this the reclamation of wastes. either heath or marsh, is a much more profitable business than when land is cheap. The efforts being made at present by the Dutch Government to extend the cultivated area are quite heroic when viewed either by the expense involved on the results obtained. most striking case is, of course, the scheme which is now on foot for draining the Zuider Zee, but many years must elapse before land so obtained is in full production. In Friesland alone, in 1925, 2,100 acres of marsh were drained and 725 acres of sandy wastes brought under cultivation.

The greater part of Friesland is not actually below sea level, but in no part is it much above it. The highest ground usually consists of embankments to keep water out, and in a natural state most of the province would be flooded in winter. Through a system of embankments and canals the whole province forms one large drainage system, or "polder." from which sea water is kept out and from which rain water may be pumped. Within this large polder are numerous smaller ones. and within these smaller ones still. In this way water from smaller polders is pumped into channels of larger ones to be again pumped into the main drainage system of the whole province. The making of small polders is left in the hands of the farmers concerned. who join together in co-operative societies for this purpose, but as the size of the undertaking increases the assistance and control of the State becomes both desirable and necessary. In these days cooperative societies for making polders are effectively financed in Friesland by a co-operative bank in Leeuwarden, called the Zuivelbank. which exists specially to finance these and similar co-operative undertakings. The high price of land is sufficient to insure the financial success of most polder associations. The gradual change from waste marsh to grassland of excellent quality, as good herbage plants slowly colonise the drier ground, is one of the most marvellous sights in Holland, and can only be compared with the opposite process of irrigation in deserts. In recent years the windmill pumps of Holland have been largely displaced by more powerful electric ones which are far easier to control. It is a mistake to imagine that these pumps are feverishly working all the year round, for during the summer crop growth utilises a large part of the rain which falls, and during the winter when all stock is in the stalls the water-level is allowed to rise. It is in spring and autumn that the pumps are mainly employed, when by judicious use the grazing season can be extended to its maximum. In addition, in the larger polders full advantage is taken of the effect of strong winds in heaping up water in the direction in which they are blowing, and of the rise and fall of the tides.

From the description of polders given above it is evident that the water-table is never far away from the surface of the soil. In many cases the difference is only a matter of a foot or two, but in some parts of Friesland the difference is a little greater. It is not easy to account for the fact that about 40 per cent. of Holland is under permanent grass, but one of the main reasons is because the water-table is so near the surface of the soil that arable farming is very difficult. In a strip of land bordering the north coast of Friesland, running from Harlingen to Dokkum, the land surface is just a few feet higher than it is elsewhere in Friesland and nearly all arable land in the province is concentrated in this small area. Here about 44 per cent. of the land is under grass, while in all the remaining parts of the province little more than 5 per cent. is under the plough and many farmers have no other crop than grass. Typical dairy farming in Friesland is a system of keeping cows throughout the year as much as possible on grass, hay, and grass silage, while any other foods which are required must be purchased.

Friesland, as a whole, is a province of small holdings, farmed by tenant farmers. The following table gives the number of holdings in each size group, and the percentage in each group owned by the men who manage them:—

Acres.	Holdings.	Owned by the farmer.		
	J	%		
$1-12\frac{1}{7}$	10,457	$46 \cdot 6$		
$12\frac{1}{2}$ — $2\overline{5}$	4,034	40 • 4		
$2\overline{5}$ — 50	3,100	$38 \cdot 3$		
50 - 125	4,004	$25 \cdot 8$		
125-250	195	$22 \cdot 6$		
Over $250$	5	60 · O		

It will be seen that nearly half of the farms are below  $12\frac{1}{2}$  acres, and the number of farms which would be considered of a fair size in England is relatively small. The decrease in the percentage owned by the farmers themselves falls off in a striking manner as the average size of the farms increases. The percentage owned by farmers is considerably lower than in the neighbouring province of Groningen and still more so than in Denmark.

In a land so highly developed the question of tenancy agreements and compensation for improvements is of considerable importance. In this respect Friesland is in an inferior position to England, and at present little has been done through legislation to regulate tenancy agreements and the payment of compensation for tenants improvements, but unofficial attempts are now being made by the Farmers' Union of Friesland to safeguard tenants' interests. Farms usually let on lease for periods of about five years, ending at the beginning of May, and the incoming tenant usually has right of pre-entry to the grassland in March, and to any arable land in the previous November. The farmer has no safeguard against disturbance at the end of his lease, but in most cases satisfactory tenants have the first offer when renewals are being discussed. It will be seen that although in a less favourable position than English tenant farmers those in Friesland continue to do their utmost to maintain the soil in a high state of fertility, and at present they show few signs of real dissatisfaction with their present position with regard to tenancies.

Except for those on the belt of arable land near the coast all Friesian farms show an amazing similarity. Owing to the intricate system of ditches for drainage purposes the land is divided into very small portions, usually some three to five acres in size. If, as in many cases, the farm houses are collected into villages, these small parcels of land are at an inconvenient distance from the buildings; but many farm houses are now arranged along road sides with narrow strips of land running out behind them for a considerable distance. A typical farm with which I am familiar has land running in a strip, not more than 100 yards wide, for a distance of about two miles. Under such conditions the cows are always milked in the fields during the summer grazing period.

The farm buildings are nearly all built on the same plan in which dwelling house and cowstall are under one roof. The standard of comfort of the dwelling houses is not so high as in Denmark, nor do the people appear to be in such easy circumstances. In the main barn all live stock is housed during the winter months and space has to be found for all the hav made in the summer, and any arable crops which may be grown. The cows are generally arranged along the outer walls of the barn with stores of hav in the middle. As a rule there are no mangers of any kind, the roof is very near the cow's head, and there is a drop of about two feet into the gutter behind. The idea of a very high step to keep cows clean has existed in Friesland for a very long time, but some of the older ones are uncomfortably high. A tradition of cleanliness which drives Dutch people to wash even the outsides of their houses makes them take considerable trouble to keep the cowstalls clean. In summer these stalls are scrupulously clean, with sanded floors. One farmer friend, for example, took his clogs off to show me over his empty cowstall, which had curtains hanging in the windows. In the winter, however, when the stalls are full of cows it is much more difficult to keep them clean, and many of the old ones are too dark, too low, and too badly ventilated, to be satisfactory from the standpoint of health; newer ones, of course, are much better in these respects.

The absence of arable crops makes straw for litter purposes almost unknown. Waste hay, unfit for feeding, is the only litter available, and as a whole the cows have no protection at all against the brick floor on which they lie. When stalls are not ideal in other respects brick floors can hardly be accused of doing harm to the cows, but sore hocks and knees are a common sight during the winter months. The manure produced in this period is all very fluid and collects in the gutter from which with a wooden scoop it can be easily pushed along into a huge tank at the end of the stall which is often big enough to hold three months' supply of liquid manure. Little is allowed to run to waste. A piece of string attached above and tied to the cow's tail is very serviceable in keeping the tail out of the gutter when the cow lies down.

In Friesland, on the grassland belts, the majority of farms are managed on much the same plan. Nearly all the cows are of the black and white Friesian breed and are kept to produce milk which goes to the creameries to be made into butter and cheese. Most of the cows calve down during the early spring and produce milk from grass during the summer. Of all cows in the Friesian Herd Book 75 per cent. calve between February 1st and April 30th, and the proportion is higher with ordinary cows because less trouble is taken to make young heifers calve in autumn for the first time. It is interesting to note that nearly all heifers calve for the first time when they are two years old, but a few of the best breeders allow them to run to two and a half to allow them to grow and develop.

Cows are retained in the herd until they are too old to be profitable and the herd is recruited as much as possible from home-bred calves. Hardly any fattening is done at all. Bull calves, if not required for breeding, are slaughtered when they are very young and until the recent prohibition many found their way as veal to England.

Unlike Danish farmers who have large supplies of skim milk at their disposal for feeding to pigs, Friesian farmers, owing to cheese-making and the condensation of skim milk, have to be content with small supplies of skim milk and a certain amount of whey. In addition, the small supply of arable crops absolutely prevents pig keeping on any extensive scale, and as a whole pigs are not important sources of income on Friesian farms, where nearly all returns come from the sale of liquid milk. The sale of calves, old cows and surplus stock is almost the only other source of income on these farms.

The winter feeding of the cows is based on hay and grass silage, both of which will be discussed again below. Purchases of foods are restricted mainly to meals, oil cakes, and sugar beet slices, while root crops are practically unknown. The highly developed system of milk recording induces farmers to take sufficient interest to ration their cows satisfactorily and use high class foods. It will be shown below that the hav and silage have a feeding value higher than is usual in these substances, and the feeding value of the oil cakes is on an average higher than in England. These oil cakes are very carefully prepared by the manufacturers, they contain less fibre, more oil, and more protein than similar ones in England and as a consequence their digestibility is higher. Many of these cakes are so friable that they are sold in cardboard boxes to protect them from damage, and they are much smaller than English ones. The most important cakes are linseed, ground nut, and soya bean cake, the last two containing nearly half their weight of protein in a very digestible form and competing in feeding value with fish meal itself. There is no doubt that such heavy yields of milk as are common in Friesland would be quite impossible without high quality foods.

The grazing season begins at the end of April or early May and continues until the end of October, and when cows are once turned out to grass they remain in the fields all the time until winter brings them home again. Milking during this period is invariably done in the fields, at about 5 a.m. and 5 p.m., and is the most important operation done on the farms. Milking in the open is pleasant enough on a bright summer morning, but dark rainy mornings in October explain why Dutch people wear far more clothing than we do! During this summer period the cows rarely eat any other food than grass, and only a few of the best breeders attempt to feed concentrates, for the grass is so nutritious that the cows will hardly look at anything else. Milking is necessarily done by hand, although in recent years one or two milking machines of well known brands have been employed with complete satisfaction.

The new system of grassland farming which began in Germany a year or two ago, and which is now being tried at several centres in England, is really based on methods which have been current in Holland for a very long time, and are now employed there on thousands of farms. On these farms in Holland the cows run loose in the pasture. but are all concentrated on one small area at a time for periods of a few days-about a week-and then moved on to the next. In this way the grass is eaten off at its most nutritious stage, when about six inches high, and the whole farm is worked over in rotation. Horses, growing stock and stores, can be made to follow behind in this rotation and help to clear up residues of uneven growth left by the cows. If the growth of grass is more than the cows can eat the excess is promptly cut at the same stage of growth for hay or silage. It will be seen that there is no division of fields into pasture and meadow, and one never sees benty grass stems running up to seed. The emerald green of the herbage is one of the most striking assets of Dutch scenery, and is one of the best evidences of well managed grassland.

It is no uncommon thing for a field to be cut three times in a vear for hav. This means that the grass is much shorter than with us when it is cut, and the hay is more difficult to make, but when well made it has a very high feeding value. During spells of bad weather the grass is cut and made into silage in clamp silos and covered over with soil. The making of this grass silage seems to be attended with remarkably little waste, and to my inexperienced eye the material obtained appears to be of very satisfactory quality, and it certainly meets with the approval of the best farmers in Friesland. Although thousands of tons of grass silage are made every year in Friesland only one experimental tower silo exists in the province and all of it is made in clamps or pits. This silage, made from grass at a very early stage, is also of interest in containing less fibre than is found in that made in other countries, and this point may help to explain the small wastage by allowing closer packing. The smell of this silage is not always what could be desired and is a characteristic feature of a Friesian farmer's life during the winter months!

It will be seen that grass is utilised in the same stage of development for grazing, making into hay, or making into silage. Chemical research on the feeding value of grass in such a stage has been carried out at various times in Denmark, Germany and Hungary. It has recently been subjected to a very thorough investigation at Cambridge. There is no doubt that such grass is remarkably rich in proteins and has a very low fibre content and a high digestibility. In feeding value it approximates to good quality oil cakes and is distinctly better than ordinary hay or silage. Friesian farmers have had therefore at their disposal high grade foods obtained from grassland for a very long time on which to base the feeding of their cows for the whole of the year.

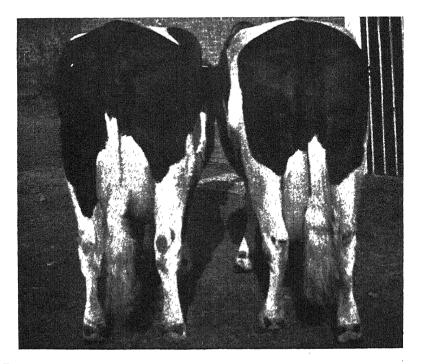
It is evident that a system of grassland treatment such as that

outlined above would be very exhausting to the soil unless manured on a generous scale. In Friesland, however, the proximity of the water-table to the surface of the soil, controlled by the pumping stations in summer, keeps the grass growing vigorously all through the summer. In addition, nearly all the liquid and solid excrements from the cows find their way on to the grass fields, usually after being made into composts with alluvial material obtained in cleaning out the innumerable ditches which drain the farms. The use of basic slag. superphosphate, and potash manures is very common and recently nitrogenous manures have been used as well. It is becoming common to dress pasture fields, which have been adequately manured with phosphates and potash, with nitrogen compounds in the spring to give the grass an early start, and again in June after the first crop of hav, at the rate of about one cwt, to the acre. In Germany, dressings of four cwts, per acre of sulphate of ammonia are being tried on the same system, and during the last two years trials in Friesland have been carried on by Mr. Wittiveen, near Drachten. So far the results which Mr. Wittiveen has obtained have been very satisfactory, and this intensive system of grassland management seems very likely to spread. It will be noticed that the main point of the present Dutch system of using grassland is in using grass for all purposes at the proper time, i.e., about six inches high. For this purpose a mowing machine and a silo of some form or other are absolutely essential. Recent Danish experiments have been directed to obtaining a uniform growth of grass all through the year by the use of nitrogenous manures, but in Holland the grassmower eliminates this problem altogether.

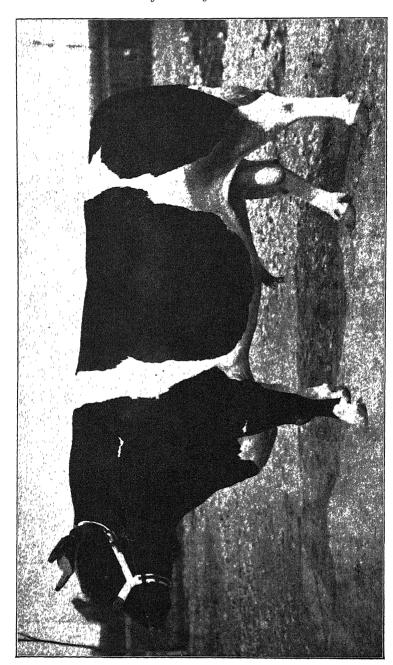
In my opinion this new system of grassland management promises to revolutionise our farming systems and bring the productivity of grassland, which usually is in a more fertile condition than any other, into line with that from land which is under the plough. The system is not yet beyond the experimental stage and must be employed with care, but even in its more reduced stage as practised by all ordinary farmers in Friesland it is worth very careful consideration. Ordinary grassland in Friesland has a stock-carrying capacity which is easily as good as the best pastures in England, and on an average the productivity of grassland in Holland is distinctly higher than with us.

Friesian Cattle.—According to the most recent census—that of 1921—Friesland contained 331,000 cattle of all kinds, of which slightly more than half were cows actually in milk, while the number of cattle being fattened only amounted to 4,568. These figures, taken together, give a very good idea of the main purpose of Friesian farming. The cows are nearly all typical Friesians, now so well known in England, and they are remarkably uniform in character, markings and size. Small differences occur between cows raised in different parts of the province and, as mentioned already, cows from the clay belt are considered the best, but such differences are very small and are disappearing fast under modern breeding conditions.

The origin of the particular breed of cattle now known as Friesians appears to be very obscure: for while cows of a general dairy type have existed in Northern Holland for a very long time they do not appear to have possessed the outward characteristics of the modern breed. Flood and disease have been responsible for many migrations of cattle, especially out of Groningen and neighbouring German provinces, while Shorthorns were imported at various times, but seem to have left behind no permanent trace of intercrossings. However obscure their origin may be there is not the slightest doubt that these Friesian cattle have been bred for a sufficiently long time to produce remarkable uniformity in general features, and their merits have been known long enough to make this type dominant over the greater part of Holland, Northern Germany and the Jutland peninsula of Denmark. These members of the breed which one finds in Friesland are most noteworthy for their immense yields of milk, and the evidence they show of very careful breeding, particularly with regard to the width and fineness of the hind quarters, and the remarkable width between the pin bones to form almost a perfect rectangle, or "vierkant," with the hips. This gives room for a very large udder and provides for the



F.R.S. Photo.] Dutch Breeders always like to see their cows from behind.



GERBENS 58 (F.R.S. 11012). Born March, 1919. Awarded 73 points on Inspection. Declared "preferent" in 1925. F.R.S. Photo]

easy delivery of big calves. Dutch breeders always like to see cows from behind.

Modern Dutch breeders are very keen on vigour and constitution, and are not allowing waves of fashion to refine the breed to the point of undermining health, or to sacrifice utility for fancy points or markings. Constitution still shows itself in the width of the muzzle, the set of the neck, and the healthy development of bone; but one must not imagine that the result is an ugly, bony, milk machine, for the general appearance of the cows is remarkably pleasant, and shows that beauty and utility need not necessarily be kept separate.

Although Friesian cattle have been carefully bred for a considerable length of time, and although modern breeding methods in Friesland are as scientific as in any other part of the world very little use was made of herd book registrations until about 20 years ago. The first herd book for cows in Holland began at The Hague in 1875. In this book cows from all parts of the country could be entered and all types were eligible. Dissatisfaction with outside control and the knowledge that their province produced the best cattle stimulated Friesian breeders to begin a book of their own in 1879. At first little interest was taken in it and by 1900 the number of members was only 630. but following a general reorganisation fresh interest was aroused and membership increased from 2.329 in 1910, to 3.265 in 1915, and 3.533 in 1921; at the same time the number of cows entered in the herd book rose from 49 in 1895, to 829 in 1905, 12,479 in 1915, and 15,096 in 1923. At the present time about one cow in 12 of all cows in Friesland is entered in the book, and when registrations of young stock are included the proportion becomes one in eight of all cattle in the province.

Cows of breeds other than Friesian are very rare indeed in Friesland. and while a certain amount of impure blood remains the animals are all of the common dairy type. In this respect the province has an enormous advantage, in the first place because of the large percentage of cows already entered in the herd book, and secondly because nonpedigree breeders are continually improving the standard of their herds through purchase of pedigree bulls of recorded ancestry which cross well with ordinary commercial stock. As a consequence the difference between pedigree and non-pedigree animals is very small and will tend to diminish as time goes on. The province gains in uniformity in proportion as it loses in picturesque variety, and at any of the provincial shows the visitor is at once struck by the complete absence of variety and colour so characteristic of English show yards, and is compelled to concentrate on the relative merits of animals which are amazingly similar in all respects. This absence of competition from other breeds has allowed scientific breeding and selection to proceed unhindered to an extent which is only possible under such conditions.

The herd book is divided into two separate registers—the herd

book proper and the so-called "hulpboek." The herd book contains only entries of cattle of known ancestry, while the "hulpboek" was closed for bulls in 1922, but contains the names of non-pedigree cows which on inspection are found to be distinctly superior to the minimum standard accepted for pedigree stock. Calves descended from cows first entered in the "hulpboek" eventually find their way into the herd book proper if they are up to the accepted standard. The increased interest which has been taken in the herd book since 1900, and the closing of the "hulpboek" for bulls, has had a great influence in increasing the entries of pedigree cattle at the expense of the "hulpboek," but fresh blood is still coming in as non-pedigree cows in fairly large quantities. In no case is an animal allowed to be entered in either of the books unless on inspection it comes up to standard. No notice is taken of milk yield, but the following scales of points are used for cows and bulls:—

		Cor	ws.				
Head (shape, eyes, nose and horns)						8	
Neck, shou						10	
Back, ribs,	flanks					8	
Loins						8	
Rump		• • •				12	
Thighs	• • •	•••	• • •		• • •	6	
Tail		• • •	•••	• • •	• • •	4	
Legs		• • •			• • •	6	
Udder, tea			ations		• • •	20	
General ap	pearar	ıce	•••	•••	•••	18	
		,	TOTAL			100	
Bulls.							
Head (shap	e, eye	s, nose	)			9	
Horns		•••				6	
Neck, chest, chine, shoulders						12	
Back, ribs		•••				10	
Loins						8	
Rump		• • •	•••			10	
Thighs		•••	•••		•••	6	
Tail	• • •					3	
Legs, carrie		···	•••	• • •	• • •	10	
Milk indica			air	•••		6	
General ap	pearar	ice	•••	•••		20	
			TOTAL	•••		100	

Cows are not inspected until they are nearly three years old and have calved for the first time. Unless they gain 70 points they are disqualified, while non-pedigree cows must gain 75 points for first entry in the "hulpboek." Bulls are inspected twice, the first time at 13

months old, and again when 18 months old. The points awarded are retained and entered in the herd book and serve a very useful purpose in educating less experienced breeders up to the ideals of high class animals, and in assessing the value of a bull for breeding purposes. Besides ordinary registration records are kept of matings, calves produced, measurements of different parts of the body, prizes awarded to the animal and its descendants, and of all production figures supplied by milk recording societies.

There is at present no advanced register, but through the points awarded, and the production figures, it is easily possible under present conditions to sift out the very best from the mass of good animals. In addition, the Friesian Cattle Society has an excellent system of calling attention to those particular bulls which have had the greatest influence in improving the quality of their offspring. These bulls are called "preferent." To be declared "preferent" a bull must be at least five years old and must have 150 known descendants registered in the herd book. Careful comparisons are then made between the bull's daughters and their mothers in regard to general appearance, milk yield and butter fat percentage. If after such a comparison a bull is found to have had a distinctly beneficial effect in improving the breed he is duly declared "preferent," but the number so declared in any single year is very small. This system has had a considerable influence in calling attention to certain lines of Friesian bulls, particularly the world-famous Jan line-Jan, Nico, Wodan, Gerard, Wodan II, Roland II, Hatsumer Gerard, Wodan Jan, Albert III, Gerbens, Lord, Hans, and Tierk Hiddes. This single line is now responsible for about 75 per cent. of all new entries in the herd book.

The "preferent" system mentioned above was initiated by the Provincial Committee for Cattle Breeding, which is an organisation distinct from the Herd Book Society and which receives a small subsidy from the Central Government: but the two organisations work very closely together. This provincial committee also does very useful service in holding local inspections of bulls in the province in spring. At these inspections bulls are judged on a scale different from the one given above in which points are also awarded to an animal for its ancestry. If a bull has a "preferent" bull as father it gains six points, if as grandfather three points, and so on. At these district inspections medals are awarded, but no money prizes. The results with the points awarded are published widely in the daily papers. Each year, in addition, the Friesian Cattle Society holds central inspections in Leeuwarden; one is held in early May for bulls, and another in autumn for bulls, cows and heifers. At these inspections breeders are discouraged from sending animals in a very fat condition. The results of these inspections show how the centres of greatest interest at present in Friesland are Berlikum, Winsum, Francker, and Beetsterzwaag, while other centres, once famous, are now falling behind.

The great use which is made of pedigree records and the keen

interest taken even by ordinary farmers in line breeding renders it easy to apply exact data in further improvement. In this respect too much importance cannot be attached to the magnificently developed system of milk recording which is now found in Friesland. In that province alone there are 114 milk recording societies, with 117,800 cows on their books, or about 75 per cent. of all cows actually in milk. and as many as the total number of cows and heifers in the whole of These milk recording societies are all small in membership, they include herds varying in size from one to 50 cows, and they are frequently associated with the local creamery. This point is of considerable importance for the recorder can cycle to any farm for any milking time and return to the creamery to carry out butter fat and other tests along with the routine tests of the creamery. Around some creameries nearly every single cow is now recorded. The recording is done in nearly all cases by the recorder himself, and takes place usually at intervals of three weeks. At the end of the year the total yield, the average fat percentage, and the yield of butter are estimated. The results obtained are of considerable interest. The average yield of all cows in Friesland is estimated by the Dutch Government from statistics supplied by creameries to be between 750 and 800 gallons, while that of pedigree cows in the Friesian Herd Book in 1924 was almost exactly 1,000 gallons. Beside these English figures do not appear very impressive. The average yield of the pedigree cows is rather higher than it would be if all heifers were entered in the herd book as soon as they come in milk, but because the majority of Dutch cows calve in early spring these yields are lower than if they calved at almost any other time in the year, and very few cows have lactations which run for more than a year.

In spite of the widely used system of milk recording the yield of pedigree Friesian cows, as measured by quantity alone, has changed very little in the last 20 years. This may be due perhaps to changes in the system of recording, but at any rate the average figures show oscillations but little progressive change. There is evidence, however, that the yields of ordinary cows have been slowly rising in recent years. On the other hand the quality of the milk has improved in a very striking manner since milk recording first began. This improvement in quality has been stimulated by the system of analysing all samples taken by the milk recorder, and to a still greater extent in recent years by the system under which the creameries pay for milk according to its fat content. Every farmer is alive to this question, which is of great importance with the Friesian breed of cattle, and public attention has been called to it through an estimate in a recent Government report that an increase of 1 per cent. in the average fat content of the milk of all Dutch cows would bring in an additional revenue of over half a million pounds sterling in a year The graph on the opposite page shows how the fat percentage of milk from cows entered in the Friesian Herd Book has risen steadily since records were first kept. This gradual improvement is not confined to pedigree cows, but is true of all cows in Friesland and other parts of Holland, and for comparison the graphs also show that the movement is going on in Denmark and Sweden at much the same rate. The milk from ordinary commercial cows in Friesland is not so rich in fat as that from pedigree ones, but reports from creameries show that it is improving steadily as well. In a Government report the fat percentage of milk from all

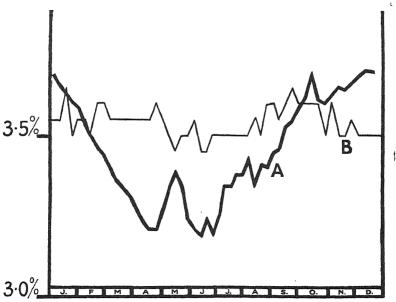


GRAPHS, showing the improvement in the average fat percentage of milk.

A—Pedigree Friesians in Friesland. B—Mixed herds in Östergötland, Sweden.

C—Mixed herds in Funen, Denmark.

cows in Friesland was estimated at 3:10 per cent. in 1910, and 3:26 per cent. in 1922, while the Friesland Bond of Creameries estimated it at 3.38 per cent. in 1925. By contrast the mothers of all bulls at the local inspection at Berlikum in 1926 averaged 3.84 per cent. This improvement in the quality of milk, so striking in recent years, is doing much to remove the stigma which has always attached to cows of the Friesian breed. Of course many cows, and some entire herds, are still found which average below 3.0 per cent., but reports from creameries and milk recording societies show how rapidly the number of such cows is dwindling. On the other hand cows with 5 per cent. of butter fat are met with here and there, and although their number is at present small they point the way to future possibilities, and they may represent a limit under present breeding conditions. Since, however, it is now known that some foods reduce the fat percentage of milk there is now a prospect that others may be found which increase the percentage to a similar extent, as has been claimed in recent experiments in Denmark and America. The reports of creameries also show a striking change in the quality of all the milk they handle at different times of the year. This variation is shown in the graph on this page, obtained from milk delivered to Gickerk creamery in 1924–25. Other creameries show changes which are strikingly similar, and variations from year to year are very small. As one would expect, the milk is richest in winter and poorest in April and June but the sharp rise at the end of April is very difficult to explain, coin ciding as it does with the beginning of the grazing season, as is also the sharp fall soon afterwards. This rise and fall towards the end of April is not always so great as in the graph shown but it appears to be a constant feature under Friesian conditions. By contrast the other line shows similar results from Randlev creamery in Denmark and shows amazing constancy throughout the year. My information from other Danish creameries is still very small, but all indications point to



AVERAGE FAT PERCENTAGE IN MILK THROUGHOUT THE YEAR.

A—All milk delivered to Giekerk Creamery Friesland, 1924–5.

B—All milk delivered to Randlev Creamery, Denmark, 1924–5.

a general agreement with the graph shown. It must be remembered that these graphs only show the variations in the average quality of all the mixed milk, both morning and evening, delivered to the creamery. They take no account of the variations of individual cows or of individual herds which from day to day may be considerably greater than the whole range of the graph. They do, however, demonstrate the importance of the problem of the fat content of milk and

suggest the need for a thorough research into this very complicated subject.

In Friesland as a whole no attempt is made to force cows into giving excessive yields of milk and no world's records have been created. At the time of writing the record yield in Holland was produced by the cow Ymkje VII, belonging to Messrs. Schaap, of Deersum, which recently gave 28,960 pounds of milk, with 3.78 per cent. of fat in 365 days. While two-thousand-gallon cows are scarce the high average yield of all cows in the province is a wonderful tribute to the ordinary farmer's skill in breeding and feeding. There is nothing in the rearing of these cows which is particularly remarkable; the calves receive just ordinary foods, the yearlings feed mainly on hay and grass, and the heifers come into the herd as nearly as possible at two years old. By contrast, of course, very few points are lost through slovenliness, or lack of practical attention to the everyday needs of growing animals.

Other stock on Friesian farms need no lengthy description. The Friesian horse is a light, leggy animal, with a black coat; and has only light work to do where plough land is scarce and hills completely absent. There are two breeds of long-wool sheep—the Texel and the Lincoln—both very much alike. The ewes are often milked for household purposes, and many are kept by the labouring classes. The most remarkable thing about them is that many of the lambs are weaned at six weeks old so that their mothers may be milked, and these lambs grow better than one would expect. The common breed of pig is descended from the "Land race" or local breed found all over northern Europe. Dutch breeders draw mainly on Germany for fresh breeding stock, but the pigs are not so well developed as in Denmark. Poultry account for an almost negligible part of a Friesian farmer's income and many farms are without any at all.

General Organisation.—Upon the base of an intensive system of dairy farming very efficient organisations have grown up in the last 50 years to supply the farmer in all his various needs. These organisations are nearly all co-operative either in origin or in policy, and are remarkable proof that the idea that tenancy and co-operation cannot go together is absolutely false. The work of the Friesian Cattle Society has already been described, as has also the excellent system of milk recording. The creameries, however, deserve a little more attention. The first co-operative creamery was begun in the village of Warga in 1886, very shortly after similar beginnings in Denmark. Since that time the movement for co-operative creameries has developed in a most striking manner, and now every farmer in Friesland is within range of one, and the making of butter and cheese at home has become a legend. This change has relieved the farmer's wife of very laborious work and by comparison she now seems to lead an easy and inactive life, wholly confined to the house, although on the smaller farms some women help to milk.

There are now in Friesland 89 co-operative and 30 private

creameries in working order. Nearly all of these creameries make both butter and cheese. The co-operative ones are owned by the farmer members and all appear to be in a very healthy financial position. and to be well managed. New extensions are constantly taking place and technical improvements are encouraged through the Provincial Bond of Creameries, while financially they are controlled and assisted by the Zuivelbank in Leeuwarden. These creameries are in general newer than similar Danish ones, they are larger, and appear to be better equipped, but whether this is due to their recent origin or better management is difficult to decide. In contrast also with Denmark they nearly all produce cheese as well as butter in roughly equal amounts. The produce is of good quality, but most of it goes to Germany. The most important cheeses in point of quantity are Edammers, Goudas, Levden, Cheshire and Cheddar, but fancy and lunch cheeses are being made in increasing quantities. A good deal of these cheeses contains less fat than would be obtained by using pure new milk and the following grades are on the market: -"full fat," "40 per cent.," "30 per cent.," and "20 per cent." Large quantities of these lower grades of cheese are consumed in Holland and Germany, but English buyers are only offered the higher grades. All milk for making butter is now pasteurised in the usual manner, but for making cheese it is still an open question whether to pasteurise the milk before, or the whey after, making cheese. In any case without legal compulsion creameries and farmers are fully aware of the advantages of pasteurisation in the fight against tuberculosis in cattle. as will appear below.

A few of the larger creameries are now producing condensed milk, which is generally made from skim milk. Most creameries, however, send their surpluses to a factory in Leeuwarden—the Co-operative Condense Factory—which does nothing else than condense milk. This factory is one of the most modern and efficient ones I have seen inside, it is very well managed and financially sound. It makes its own tins and has its own selling brands of condensed milk, and a scientific control to look for defects at any stage of manufacture. It stands as an excellent proof that co-operation in Dutch agriculture does not rest on sloppy sentiment, but on sound business and economic principles.

Farmers are invariably paid for their milk on its fat content as shown by the Gerber test. In this respect and in the publication of full information about their finance and production the creameries in Friesland are ahead of those in Denmark. On the other hand the Danes have advanced further by introducing systems of payment for milk based in part on its keeping qualities as shown by the "reductase" test, but the Friesian creameries are also fully alive to this question and so far have not adopted this test because on investigation by the Health Service for Stock it appears only to give a rough idea of the bacterial cleanliness of milk. Efforts are, however,

being made in Friesland to devise a reliable test on which a system of payment may be based which will encourage farmers to produce milk in a high state of purity, and the Dutchman's love of cleanliness, which amounts almost to a religion, will ensure a ready response on the part of the farmers to any further progress in this direction.

Holland itself is a fairly large consumer of its own dairy produce, although rural people now eat as much margarine as butter. For export purposes, and to an increasing extent for inland sale, the creameries are organised into co-operative sale societies. The Co-operative Export Association in Leeuwarden deals with the production of its 40 creamery members. It also exercises useful control over the policy and equipment of its creameries, and carries out tests to maintain and improve the quality of the produce it handles. There are also separate associations in Leeuwarden for the sale of butter and cheese.

Nearly all creameries in Friesland are members of the Provincial Bond of Creameries, which is a member of the Federated Bond of Creameries for the whole of Holland. This Bond has nothing to do with the sale of produce but it does magnificent work along the following lines:—It is officially recognised by the Dutch Government as the leading representative of all agricultural questions dealing with dairy produce. It assists in the creation of new co-operative creameries, in erecting the necessary buildings, and in enlarging existing ones. It encourages uniformity in finance and regularly inspects the financial condition of those creameries which belong to it, suggesting alterations and improvements. It inspects and tests all kinds of apparatus and materials required by its members for making dairy produce. It organises courses and conducts examinations in butter making. cheese making, and dairy management. It holds periodic inspections of the butter and cheese made by its members and encourages further improvement through competitions and diplomas. The results of these competitions show a gradual improvement in quality ever since the system begun. It is now investigating the water supply of very many creameries, for this is a serious problem in such a low-lying country. The headquarters of the Federated Bond are at the Hague; the office at Utrecht is now capable of planning and erecting entire creameries, and is engaged in big extensions to the existing ones; and the buying department at Arnhem supplies all kinds of requisites to the different creameries. This organisation of co-operative creameries in Holland is as complete and efficient as any other in the whole world.

One of the most striking movements which owes its origin to the work of the Federated Bond of Creameries is the Health Service for Stock. Beginning as one small association of farmers in 1919 there are now in Friesland alone over 20 of these associations whose object is by mutual aid to improve the general health of all farm stock. This work is entirely distinct from that of the State, which is mainly

concerned with notification of disease, legal restrictions, and slaughter of infectious animals. These health associations usually centre round a creamery, the members bind themselves to do all in their power to improve the health of their stock and pay their own expenses. The line of attack lies in improved and more sanitary buildings, pasteurisation of all skim milk and whey brought back from the creameries. notification, isolation, and, in case of need, slaughter of infected animals. The most serious diseases dealt with are foot and mouth disease, tuberculosis, contagious abortion and sterility. So far all efforts against foot and mouth disease have proved unavailing, and the ravages of this pest on the scale of its prevalence in recent years has to be seen to be realised. On a recent visit nearly every second farm seemed to exhibit the usual warning sign, and every farmer expects the disease once a year as a matter of course. The toll in loss of condition, loss of milk, loss of quarters from the udder, and through the death of the weaker animals is very heavy indeed. The general apathetic attitude of the farmers towards this disease is well illustrated by a friend and good farmer who opened a diseased cow's mouth to show me her swollen tongue and then cycled back to his son's uninfected farm without taking any precautions at all. This attitude is, of course, due to the fact that up to the present all attempts to combat this disease have proved equally useless.

By contrast, the work done by these health associations in fighting other diseases can only be described as heroic, and the annual reports they issue make very impressive reading. Relying mainly on isolation of young stock before it becomes infected, on pasteurisation of creamery by-products, and by using the eye test, these associations have made very considerable progress in the fight against tuberculosis. During last year 108 herds in Friesland alone were declared free from tuberculosis, and around many creameries the proportion of reactors among the cows has fallen to 10 per cent. In 1925 the combined associations delivered enough tuberculin to test 70,000 cattle. Microscopic tests on body tissues were also carried out, and a working agreement has been entered into with the local butchers to check the efficacy of the various tests for tubercle bacilli. To an outsider the methods adopted appear rather amateur, but carcase tests demonstrate conclusively that very considerable progress has been made even within the last three years. At present animals infected with tuberculosis are often sold and so spread the disease elsewhere; and cases are on record where one single reactor has infected a whole herd within a very short time. In 1925 these associations also distributed 170 litres of abortion culture, and tested 1,100 samples of blood for abortion bacillus. Injections of many cows against abortion are claimed to have had a beneficial effect, but so far the success is not complete. Tests carried out on bulls show that they may pass through phases of complete sterility and yet recover and become as successful in getting calves as any others. A serious effort is also being made by bacterial counts to produce milk up to the standard of purity represented by Grade A

(T.T.), although no grading system at present exists in Friesland with regard to milk for consumption. In addition, this Health Service for Stock has initiated a system of granting certificates of health for animals exported abroad, and is already carrying out preliminary inoculation work on such animals against diseases which they will meet on their arrival. It will be seen that these health associations, which still are quite voluntary, have already done an enormous amount of good in improving the general health of stock, and the future before them is very promising.

In Leeuwarden there is a co-operative egg collecting association which first began in 1902. It collects, grades, packs, and sells eggs, and all kinds of poultry, and it supplies members with foods and appliances. Owing to rapid expansion it has already been compelled to move into larger premises on two occasions, and it now shows signs of continued prosperity and serious overcrowding in its present quarters.

In addition to small private slaughterhouses there is a co-operative bacon factory at Akkrum which was started in 1916. This factory handles pigs for both pork and bacon, and to a smaller extent kills young calves and cattle. It attempts to maintain uniform production by fairly extensive buying in the open market. Working as a pioneer this factory has not escaped the usual difficulties of delivery contracts. of finding good markets for its products, and of amateur management and finance. Like English factories it has been handicapped through the lack of uniformity in the pigs sent by its members and through being compelled to pay full market prices for its pigs and shoulder all risks of market fluctuations. In recent years, after reorganisation, it has made steady progress, it is paying off gradually its loan capital and building up reserves, and although its present state is still not too secure it seems to be winning through and mastering its difficulties one by one. The recent embargo on Dutch pork has enhanced its value to the Friesian farmers and will assist it financially by compelling them to give it more support.

As further examples of co-operative effort in Friesland one must mention the supply association for cakes and meals at Leeuwarden, associations for the sale of market garden produce and seed potatoes, and co-operative insurance societies. By contrast, the only sugar beet factory in Friesland and the potato starch factory are both in private hands.

By far the most widely spread organisation in Friesland is the Friesland Farmers' Union. When it is realised that it is only a provincial association covering an area not larger than an English county the list of its activities is very impressive. Founded as early as 1852 it now has a strong membership. It has published for many years a weekly agricultural paper called the "Friesche Landbouwblad,' which is an excellent production, and from which a good deal of the information in these pages has been obtained. It stimulates

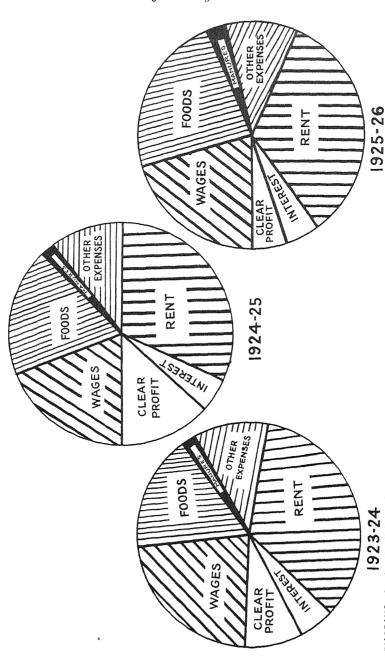
discussions on farming topics and publishes a summary of conclusions. It is busy investigating the cultivation of flax, water supply and crop growth, polder formation, and the making of grass silage, for which purpose it has an experimental silo. It has a good library of agricultural books open to its members. It organises numerous winter courses of lectures on all aspects of farming. It has a special department to deal with questions of tenancy, another for farm planning and machinery, and another to deal with stock rations. It has an expert for plant breeding who has recently produced the new potato variety called Alpha, which shows considerable promise. It runs an experimental dairy farm and another at Engelum specially for plant breeding. Through its assistance an association for keeping farm accounts has been started which now exists as a separate institution and was looking after the accounts of 709 farms in Friesland in 1926. It has a special expert to keep in touch with economic changes in countries abroad, to introduce prospective customers and to organise excursions. It is the co-ordinating system which knits together into one complete whole all other agricultural organisations in the whole province. In conjunction with the State and the Bond of Creameries it carries out tests to see that the dairy produce for export is unadulterated and up to the necessary standard. The Rijksmerke which is affixed to produce which passes the test is now well known to the buying public and is worthy of every confidence.

On the financial side there are numerous co-operative undertakings to provide funds for agricultural objects. The Zuivelbank in Leeuwarden, which was began in 1912, has already been mentioned. In addition to carrying on the work of an ordinary savings bank it specially exists to finance creameries, polder associations, and other co-operative societies connected with agriculture. Chean and abundant credit is thus available for associations from an organisation which specialises in this type of work, and which can estimate risk more accurately than a private bank. For farmers and rural people as a whole Friesland is covered with a network of co-operative banks on the Raiffeisen plan, which take the place of ordinary banks. Friesland alone there are now 103 of these banks associated with the Central Bank at Utrecht, and six associated with the bank at Eindhoven. These central banks serve an excellent purpose in acting as bankers to the local banks, in inspecting their books at frequent intervals, in regulating policies, and avoiding loss. The local banks accept deposits and make short term loans to rural people for the purchase of stock, implements, and other working capital. Managed as they are by farmers who live in the same village as the people who require credit risk is reduced to a minimum and the rate of interest is not higher than that of Government securities. A compulsory registration system enables private people to supply nearly all long term credit, but, if necessary, a special branch of the Eindhoven bank will make similar advances under an excellent system in which a sinking fund is included, where the rate of interest on any one loan never alters, and where the loan cannot be called in before the time fixed in the agreement. This system of co-operative credit, in Holland is of recent growth, it is now almost perfect in its efficiency, and it compares very favourably with any other credit system in other countries.

Conclusion.—The final question in any economic system is the position and outlook of the people themselves. When reviewing the resources which Friesian farmers have at their disposal one is deeply impressed by the efforts which have been made to extend the area of cultivated land, by the energy and skill shown in the management of grassland and the stock which feeds upon it, and by the efficiency of the marketing and supply systems which have grown up to take full advantage of recent economic changes in world supply and demand. The credit system available for these farmers could not easily be improved, and they are controlled by a Government which at least is sympathetic.

Conditions such as outlined above should open out a way to prosperity and ease, yet in spite of all these signs of progress of which full advantage is being taken the present condition of farmers in Friesland and the whole of Holland is not very reassuring and gives cause for serious thought. Their present position is no fault of the farmers who are doing their best to keep abreast with modern changes but it is due partly to the general depression in agriculture which affects most of the civilised world at the present time, and in part it arises from domestic troubles within the country itself. Of external factors the reduction in purchasing power as a result of the war and subsequent currency troubles has reduced the foreign demand for Dutch farm produce. In particular the selfish tariff policy of Germany is having a serious influence on Dutch farmers who gain nothing by corresponding duties. The recent embargo in England on fresh meat has caused a reduction in profits which is probably less in Friesland than further south, the competition in dairy produce from the colonies becomes keener and keener, and the activities of the Empire Marketing Board, and the recent Imperial Conference, are viewed with considerable misgiving.

Of troubles peculiar to Holland itself the most serious are the marked increase in population and the heavy expense of keeping the sea continually at bay. As pointed out above over population is leading to feverish activity in land reclamation, but it also causes severe competition for employment and for holdings to farm, with its corresponding effects upon wages and the price of land. The high price of land is a serious obstacle to new beginners and a heavy tax on gross profits. It is not easy to find out the real wages of ordinary farm workers owing to various allowances in lieu of money, but the total wage for a full-grown man seems to be about 35 shillings a week at the present time. As it stands this wage is more than many English



DIAGRAMS, showing the division of gross income on costed farms in the clay belt of Friesland. Interest is interest on working capital which, together with the clear profit, represents the tenant farmer's share. From this interest on any borrowed capital must be deducted.

labourers earn, but in Friesland the men work nearly 12 hours a day, beginning about 5 a.m. and not ceasing until 7 p.m., except for short mealtime breaks. Sunday too is included, and is nearly as busy as any of the other days during the winter months.

The farmers, for their part, are mainly small holders employing only one or two workmen. Their main source of income is from liquid milk delivered to creameries, but since this is made into butter and cheese the price varies between 8d. and 13d. a gallon, and the bulk is delivered during the summer months when its quality is lowest and the price not above 10d. a gallon. Compared with milk other sources of income are relatively unimportant, and in any case leave but small margins after expenses have been met.

During the last few years reliable figures have been available of the agricultural situation through farm book-keeping associations whose results are now published by the Dutch Government. diagrams on the opposite page have been prepared from the average results of several farms in the best farming district of Friesland. Owing to the small size of the farms the wages bill is comparatively low, but by contrast the large fraction of all income taken by fixed capital is very striking. The whole structure of finance on these farms is top-heavy and in proportion to the risks he bears and the efforts he makes the farmer's profits are precariously low. House rent is not included in the accounts, but if it is allowed to the farmer as payment for the extra trouble he takes as manager the figures of 1923 show that he would have been just as well off as an ordinary labourer with a similar amount of capital invested in trustee stock, in 1924 he made on an average about £80 more than this, but in 1925 he would have been £35 better off as a workman with the same capital. These results are, however, for men managing farms averaging 75 acres in size and all evidence shows that as a whole farmers who keep books are more prosperous than the average, not so much because of the accounts, but because they are wider awake and more progressive. On ordinary farms, therefore, the farmers cannot be in any materially better position than the men who work for them, and their capital brings in little extra return beyond that of social independence, a greater stake in life, and rather better housing. This is certainly true of those men who are managing the smaller type of holdings, because agricultural conditions in Friesland admit of little advantage on smaller farms through more intensive methods and greater gross output. These results also show how absurd it is to imagine that low wages and long hours necessarily mean severe competition, since other elements enter into production costs as the diagrams show.

In Dutch agricultural circles very many opinions have been expressed which favour a general reduction in rents since it is obvious that they represent a fraction of the gross profits which might either be reduced or diverted to the farmer. It is, however, equally obvious that such reductions in rent would seriously affect the income of

relatively leisured people and drive them into active employment. and would interfere with reclamation or even the finance of those improvements which are necessary for maintaining ordinary farms in a productive state. The system of farming holds out little prospect of great reductions in working costs through mechanical appliances. and further progress in increased fertility and output seems likely to cost nearly as much as it will return. Many people in Holland now favour some form of political assistance through protective tariffs. but the economic position of the country is such that measures like these would probably do more harm than good. The only ray of hope appears to lie in higher prices for dairy produce, but the present world position offers little immediate prospect of any marked advance in the prices of butter and cheese, and developments in the Southern Hemisphere will limit any upward movement in this direction. While, therefore, British dairy farmers may regard these in Friesland as their rivals they can only have respect for their industry and farming technique, and a good deal of sympathy for their present economic condition.

## VARIATION IN THE COMPOSITION OF MILK AND ITS CONTROL BY THE DAIRY FARMER.

By HAROLD T. CRANFIELD.

In the production of milk three main factors are involved, viz., yield, cleanliness and quality. The first factor named is being dealt with by milk recording and breed societies, whilst the second is forming the subject of numerous "clean milk" competitions and much propaganda. Quality of milk, however, appears to have suffered some neglect in recent years, particularly with regard to the non-fatty solids, and there appears to be a strong case for reviewing our present knowledge on this all important subject.

To the majority of milk producers, quality is synonymous with fat percentage, and one frequently hears of milk being judged solely by its capacity to produce a thick layer of cream on standing. One must not lose sight of the fact that the solids other than fat in milk are present to the extent of  $2\frac{1}{2}$  times the amount of fat, and in feeding value exceed the fat by 10—20 per cent. Whether milk is utilised for cheesemaking or sold for liquid consumption, the non-fatty solids content should receive due consideration.

Milk, like all natural products, is very variable in composition, but since the bulk of it, in this country, is sold in the raw state and, moreover, is not graded according to composition, it should be the aim of the dairy farmer to produce an article of fair average composition. Now the question arises, how far is this ideal within the control of the milk producer?

Recently the writer has had this question under examination, and as a result of three year's research, much interesting and useful information has been gained, which indicates that variation in the composition of milk is an exceedingly complex subject and one concerning which comparatively little is known at present. Numerous factors are involved, many of which can be controlled by the dairy farmer if he so desires.

It is well known that the composition of the milk of individual cows varies greatly. Reference to the records of competitions held each year at the various agricultural shows in this country, and to Dr. Tocher's recent memoir on the Composition of Scottish Milk (1) will confirm this statement, but less is known concerning variation in the composition of the mixed milk of herds. During 1925-26 the writer investigated the composition of the milk of 15 herds situated

in various parts of the country, the number of cows in these herds varying from 5 to 170. In all, 732 samples were analysed. The analytical data together with herd and farm observations have been carefully analysed and important points elucidated.

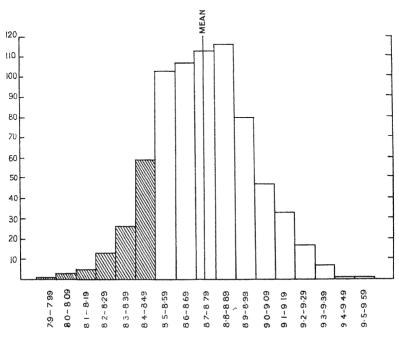
#### EXTENT OF VARIATION IN COMPOSITION.

- (a) Fat.—The highest percentage of fat recorded was 5·8, and the lowest 2·2. Taking the herds individually the greatest variation was shown by a herd of 60 shorthorns. Forty-four samples from this herd gave fat varying between 2·2 per cent. and 5·3 per cent. Two herds of 18 and 21 shorthorns respectively, situated on adjacent farms and under the same ownership, showed the least variation, the fat content in the case of one varying between 3·15 per cent. and 4·3 per cent., and in the case of the second herd between 3·0 per cent. and 4·2 per cent., 30 and 28 samples respectively being received. In considering fat percentage from the legal aspect, 8 per cent. of the total number of samples were below 3 per cent.
- (b) Solids not fat.—This constituent varied between 7.99 per cent. and 9.51 per cent. One herd of 5-8 crossbreds showed a variation of 8.07 per cent. to 9.42 per cent. in 98 samples received, whilst 28 samples from a herd of 18 shorthorns varied between 8.51 per cent. and 8.95 per cent. only. One herd (30 cows) was periodically sampled for two years prior to 1925, and during this period a percentage as low as 7.23 was recorded. This is the lowest percentage of solids not fat in mixed milk which has been observed by the writer. A considerable number of the 732 samples were below the presumptive limit of 8.5 per cent., viz., 14 per cent. This is a significant figure and one is rather uneasy as to whether such a relatively high percentage would obtain or not if the milk from a large number of herds was systematically analysed. In the writer's opinion there is little doubt that a very large number of herds in this country, and not necessarily small herds, do produce milk below 8.5 per cent. on certain occasions, and, although the average solids not fat content of the milk may be high, yet there is the fear of a deficient sample, like the Sword of Damocles, hanging eternally over the cowsheds of many of our dairy farms. It is time this fact was realised and measures taken to either eliminate this possibility by careful control of the contributing factors, or, by bulking the milk of a large number of cows, prevent such a contingency arising.

In the past too great stress has been laid on average figures, in fact the presumptive limits of 3 per cent. fat and 8-5 per cent. solids not fat were decided upon after consideration of average composition figures. One should really ascertain the extent of variation from the average, and this is a point which the writer wishes to emphasize in this paper. In diagram I is given a graphical illustration of this point.

#### DIAGRAM T.

DIAGRAM SHOWING THE FREQUENCY DISTRIBUTION OF THE PERCENTAGES OF SOLIDS NOT FAT IN 732 SAMPLES OF MIXED MILK FROM 15 HERDS.



Fat percentages show a similar variation to the above, but in the case of this constituent of milk the percentage of deficient samples was found to be less.

#### CAUSES OF VARIATION IN COMPOSITION.

(a) Fat.—The following factors appear to influence the fat content of milk:--

Breed. Individuality. Disease. Climatic variation.

Lactation. Milking (first v. last drawn).

Seasonal variation. Yield.

Periodicity of milking. Frequency of milking. General management.

 ${\it Breed.}$ —The influence of breed is well known, and need not be discussed here.

Individuality.—This factor is a potent one, and operates to a greater extent in small than in large herds, although cases have been met with where herds of considerable size have contained an appreciable

number of animals giving poor milk on frequent occasions. There are many cows in this country which persistently give milk low in fat and yet appear to be quite healthy and normal in other respects.

Disease.—A cow suffering from disease cannot function normally, and many cases of abnormal fat percentages are due undoubtedly to this cause.

Climatic Variation.—Sudden changes in weather conditions appear to upset the secretion of milk and may result in milk of abnormal composition. This effect, however, appears to be temporary only, as the cow speedily adapts herself to the altered conditions.

Lactation.—In the early stages of lactation the fat content is usually below the average, but towards the end of the lactation period a rise occurs and milk rich in fat results.

Milking.—First drawn mulk is poor in fat, the content increasing as milking proceeds. The need for thorough stripping need not be emphasized here.

Seasonal Variation.—Variation of fat percentage with months of the year is due to a complex factor—one probably composed of many. This constituent of milk is usually low is summer and high in winter. Such variation may be caused by the varying conditions obtaining at these periods, e.g., climate, feeding (grass v. stall feeding), percentage of cows newly calved, and general management.

Yield.—High yielding cows often produce milk low in fat. Almost always this is due to breed, individuality or period of lactation. There may be cases where high yielding cows persistently produce milk low in fat content apart from the three factors mentioned, but it would be very difficult to substantiate this.

Periodicity of Milking.—Where uneven intervals of time separate the daily milkings, this factor has a profound effect. Milk after the longer interval is always poorer in fat content than that obtained after the shorter period.

Frequency of Milking.—Where cows are milked three times daily, the influence of time between successive milkings on the fat percentage is very marked. The morning's milk coming after the longest interval is usually very low in fat.

Feeding.—Normal feeding appears to have but little influence on fat percentage, although some workers claim positive results in this direction. There is definite evidence, however, that excess of oil in a ration tends to lower the fat percentage in the milk. This has been noticed in the case of rice meal and cod liver oil feeding. A badly balanced ration or insufficient food bordering on starvation will cause a decided change in the normal percentage of fat, but in such cases the health of the animal usually suffers. Crowther (7) states that rations rich in protein increase the fat content of milk.

General Management.—This complex factor includes system of feeding and watering, housing, sanitation, efficiency of milkers, &c. These factors affect the well-being of the herd and, although their

influence may be small, yet possibly one is justified in assuming that a contented and well managed cow will give good quality milk, other factors being normal.

(b) Solids not Fat. Factors influencing the solids not fat content are many, but information bearing on these is scanty and uncertain. The writer submits the following list, many of which have been observed during the course of the investigation which forms the basis of this paper. For sake of distinction, they may be divided into four classes, as follows:—

Acquired Code Service 1	1	1	
Fundamental.	Temporary.	Complex.	Uncertain.
Breed. Individuality. Lactation. Age of animal.	Climatic Conditions. Feeding. General Health.	Seasonal Variation. General Management.	Periodicity of Milking. Frequency of Milking. Yield.

Fundamental factors are those which are beyond the control of the dairy farmer; temporary factors operate for a time only and their influence may diminish rapidly; complex factors are composed of several factors; uncertain factors are those which probably exert an influence, but such influence is small and difficult of detection owing to the operation of other factors.

Breed.—The influence of breed on the percentage of solids not fat has not been investigated with any degree of thoroughness. On reference to the British Dairy Farmers' Association Journal for 1925 one will observe, on perusing the data obtained during the Dairy Show Milking Trials, that the Friesian breed has shown a greater prevalence to produce milk below the 8-5 per cent. limit than the other breeds. The actual figures for 1925 are as follows:

No. below 8.5 per

			cent.
Breed.		No. of Samples.	Solids not Fat.
Shorthorn		 88	()
Lincoln Red		 32	2
Friesian	• • • •	 42	8
Devon		 32	()
Red Poll		 30	2
Ayrshire		 62	4
Guernsey		 42	8
Jersey		 66	2

Certainly the proportion of deficient samples in the case of the Guernsey breed is equally high, but reference to the data obtained in former years indicates that the 1925 results are abnormal for this breed, since only one animal in the previous eight years quoted produced milk deficient in non-fatty solids.

Two of the 15 herds investigated by the writer were Friesian. One consisting of 5—9 pedigree animals gave an average solids not fat content of 8·62 per cent. (64 samples) while the second herd comprising 25 pedigree British Friesians gave, in 81 samples, an average figure of 8·61 per cent. solids not fat. 23 per cent. of the samples from the former herd and 37 per cent. from the latter herd were below the 8·5 per cent. presumptive standard. These may have been exceptional cases, but, in the writer's opinion, the present evidence is sufficiently strong to warrant a full investigation into the prevalence of samples deficient in non-fatty solids in the milk of this breed.

Individuality.—Tocher (1) in his investigation into the composition of Scottish milk found 25 per cent. of samples from individual cow's milk below 8.5 per cent. Capacity to produce milk consistently rich or poor in non-fatty solids appears to be due to some physiological factor at present unknown. An extreme example of the operation of this factor has been recorded in the case of a shorthorn cow now in the Midland College herd. This animal originally belonged to a Leicestershire farmer, and, knowing that it was producing abnormal milk, was purchased in 1925 in order that the milk could be kept under analytical observation. This cow, although aged (6 calves), appears to be perfectly healthy and normal in all respects except as regards quality of milk. Out of 133 samples of milk analysed since May, 1924. only one has exceeded 8.5 per cent, in solids not fat. 26 per cent, of the samples have been below 8.0 per cent. and 10 per cent. below 7.0 per cent. The lowest percentage of non-fatty solids recorded has been 5.30.

In the case of a herd of dairy shorthorns under normal management, samples from all cows in milk were taken on eight occasions between March, 1923, and November, 1925. The following results were obtained:—

	No. giving milk below	
	8.5 per cent. in	
No. of cows in milk.	solids not fat.	Percentage deficient.
31	14	45
32	16	50
31	10	32
29	7	24
32	11	34
28	11	39
37	14	38
16	6	<b>3</b> 8

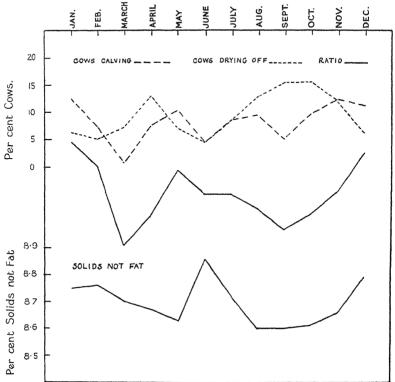
During the three years 30 cows were sold, three died, eight homebred heifers came into the herd and 29 heifers and cows were bought. One may well ask the question—are such cases as this common, or has the owner experienced almost unprecedented bad luck in the purchase of his stock?

The question whether this factor is inheritable or not also arises. There appears to be no definite evidence on this point.

Lactation.—Several authorities have contributed statements regarding the influence of lactation on the percentage of solids not fat. Summarising the evidence available it appears that the milk of newly calved cows is rich in solids not fat, but that the percentage falls until about the 8th to 12th week after calving. After remaining steady for some time, a rise occurs during the last few weeks. Analyses of the milk of several cows in one of the herds under investigation were recorded for full lactation periods, and, while the fall in solids not fat during the early stages of lactation appeared to be fairly general, there were several cows which showed a rapid fall in the solids not fat content during the last week or two.

The writer is of the opinion that the relative proportion of cows calving to cows going dry in any given period is an important factor influencing the non-fatty solids content of the mixed milk of the herd. In the case of one herd, the milk of which was sampled over a period of three years, this influence has been interpreted in the form of graphs, which are given herewith.

DIAGRAM II.
INFLUENCE OF PERCENTAGES OF COWS CALVING AND COWS
DRYING OFF EACH MONTH ON THE MONTHLY AVERAGE PERCENTAGE OF SOLIDS NOT FAT. MIXED MILK OF 30 COWS, 1923-26.



Age of Cow.—There appears to be ample evidence that the solids not fat content of milk falls with increasing age. Both Tocher (1) and Gowen (2) have observed the effect of this factor.

Climatic Conditions.—Normal changes in weather conditions do not appear to influence the quality of milk apart from seasonal influence, but there is some evidence that sudden changes producing abnormal weather do depress the solids not fat, although, if the conditions persist, the milk gradually assumes normality. The following example illustrates this point.

Influence of Weather Conditions on the Milk of a Herd of 30 Cows in Leicestershire.

Т	ate	of	Percent	age of :—	
_	amp		Fat.	Solids not Fat.	General weather conditions.
May ,,	3 4		3·45 4·30	8·68 8·85	Temperature high, above normal. Rainfall moderate. Sunshine moderate.
?? ?? ??	7 8 10 11		5·00 4·85 4·20 3·20	8·40 8·55 8·24 8·45	Temperature fell during week. Below normal. Ground frosts. Thunderstorms, snow and hail. Rainfall heavy. Sunshine moderate.
,,	14 15		3·90 3·15	8·79 8·70	Similar.
",	21 22		4·80 3·05	8:35 8:44	Similar.
"	28 29		4·25 3·35	8·51 8·95	Temperature still below normal. Rainfall moderate. Sunshine scanty.

Feeding.—Although many farmers declare that feeding influences the quality of milk, there does not appear to be any definite experimental evidence that this factor has any appreciable effect on the non-fatty solids content of milk unless the ration is sufficiently unbalanced as to affect the health of the animals, or insufficient for maintenance.

Some years ago an authentic case of influence due to bad feeding was brought to the writer's notice. A herd of 31 shorthorns were receiving an excessive ration of white turnips and in addition were grazing a rank aftermath. Four churns of milk—two evening's and two morning's—from this herd contained 7.76 per cent., 6.75 per cent.,

7.94 per cent., and 7.70 per cent. solids not fat respectively. Any adulteration was out of the question since the milking was supervised, and the samples taken, by an Inspector under the Food and Drugs Act. The feeding was immediately altered, and normal milk resulted in two or three days.

The writer is of the opinion that the quality of grass and hay, particularly when the mineral constituents are considered, may be reflected in the secretion of non-fatty solids, but has no definite in-

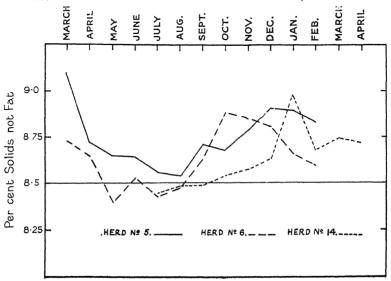
formation to offer on this point, at present.

General Health.—There are many herds in this country where contagious abortion, Johne's disease, tuberculosis and other general wasting diseases, are common. Wynter Blyth (3) has dealt with this question and is of the opinion that certain diseases only, affect the quality of milk. It is reasonable to suppose that healthy animals are more likely to produce normal milk than diseased ones. The writer has noticed that in many herds producing milk deficient in non-fatty solids, abortion is prevalent.

Seasonal Variation.—As mentioned under the section dealing with fat variation, this factor is a complex one. In average herds the solids not fat percentage appears to fall in the spring and summer, rising again in the autumn and winter. Diagram III illustrates the seasonal variation of solids not fat in the milk of three herds during 1925–26. It is believed that period of the year when the majority of the cows calve, and climatic conditions, are the two chief factors contributing towards seasonal variation.

#### DIAGRAM III.

VARIATION IN THE MONTHLY AVERAGE PERCENTAGE OF SOLIDS NOT FAT. MIXED MILK FROM THREE HERDS, 1925-26.



General Management.—It is difficult to investigate a complex factor of this type and any influence attributed to good or bad management must be largely conjectural. However, no one is likely to dispute the statement that good housing, cleanliness, free access to pure water, and other points of good management are desirable in the production of good quality milk.

Periodicity of Milking.—Unlike fat percentage, there appears to be no marked difference in the solids not fat content of morning's compared with evening's milk. Ingle (4) and Tocher (1) state that morning's milk is slightly richer in non-fatty solids than evening's milk, but that the difference is not significant. Armsby (5) quotes higher figures for milks produced after the shorter interval, i.e., evening's milk. Gowen (2) records slightly higher percentages in the evening's milk compared with the morning's milk. The writer has averaged the percentage of solids not fat in the morning's and evening's milk from the 15 herds investigated, and finds that in the case of eight herds the morning's milk was richer than the evening's, and in the case of three herds the reverse obtained. The milk from the remaining four herds indicated no difference. The average variation for each herd was between 0.05 per cent. and 0.21 per cent.

Frequency of Milking.—Since three times per day milking has been practised to a considerable extent in this country during the past few years only, little evidence is available on this point. Armsby (5) certainly refers to this factor and states that frequent milking tends to increase the percentage of solids not fat in the milk, the shorter the interval the richer the milk produced after that interval. Cummings (6) has published recently data bearing on this point, but an analysis of his figures does not reveal any significant or consistent differences between the percentages of non-fatty solids obtained at the three milkings.

Yield.—The influence of total yield of milk on the solids not fat content is referred to by Gowen (2) who states that there is no significant relationship between the two. Tocher (1) obtains an almost linear correlation curve which indicates practically no variation. In the case of one herd in the investigation under review the writer endeavoured to correlate average daily yield of milk per cow per month with the average monthly percentages of solids not fat in the milk of the herd. No definite relationship was observed, but it was ascentained that a marked influence was being exercised by the ratio of cows calving to cows drying off each month. Any possible connection between yield and solids not fat content was undoubtedly masked by this and other factors.

#### REMEDIAL MEASURES.

At this point the reader may well ask—by what means can the dairy farmer ensure the production of milk of good and uniform quality? This question is not answered in a few words.

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Firstly, the present knowledge on this subject is very scanty and incomplete.

Secondly, the factors referred to are known in the majority of cases to exercise an influence on the percentage of the constituents of milk, but the magnitude of the influence in each case is unknown.

Thirdly, the introduction of measures, indicated by these factors, to control quality in milk may be so drastic in the case of some herds, that the owners may prefer to run the risk of producing milk occasionally below the presumptive limits.

However, pending more research into this all important question, the milk producer would be well advised to carry out, as far as is practicable, the following suggestions, which would certainly minimise the risk he may now run of producing milk below standard quality.

The writer's suggestions are these :-

- (a) Periodically test the milk of every cow in the herd for non-fatty solids as well as fat content.
- (b) Eliminate those animals which consistently or frequently produce poor quality milk.
- (c) Make frequent tests of the milk of every cow or heifer bought in, or home-bred heifer calving, until satisfied that her milk is of good quality.
- (d) Distribute calving, as far as possible, throughout the year, so that at no period the herd lacks newly calved animals.
- (e) Eliminate aged cows from the herd.
- (f) Keep intervals between milking as even as possible, and bulk and well mix all the milk from each milking before dispatching.
- (g) In the case of herds where three times per day milking is practised, keep the intervals as even as possible, i.e., the third milking should be late in the evening, and bulk the morning's and mid-day's milk, if practicable.
- (h) Feed balanced rations and avoid excess of oily foods. Produce good hay and grass by efficient management of the grass land.
- (j) Observe the following points of good management:—See that the cows are carefully and completely milked; provide a pure and ample water supply so arranged that the animals can have access to water at all times, winter and summer; care for the health of the herd by improving housing and sanitary conditions, especially on farms in exposed districts.

In conclusion, one ventures to suggest that variation in the composition of milk is one of the many agricultural subjects urgently needing investigation, and it is only by whole-hearted support of such work can the farmer hope to improve his business. It may interest the reader to know that a Committee of dairy experts are now considering a scheme for research into the problems which have been discussed in this paper, and it is anticipated that this scheme will materialise, provided the necessary financial support is forthcoming. It is sincerely hoped that many of the dairy farmers of this country will take an active interest in this work, and do all in their power to carry it to a successful conclusion.

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### CERTAIN ASPECTS OF MILKING TRIALS.

By Stephen Bartlett, M.C., N.D.D.

ONE of the best known "Short Period Milking Trials" in the country is the "Two-day test," carried out yearly at the Show of the British Dairy Farmers' Association in London. In the following observations it is proposed to pay particular attention to these trials, the chief object being to discuss certain details, and where possible, to offer constructive criticism, with a view to obtaining the most reliable and genuine tests of milking ability which are possible under available conditions.

#### RELIABILITY OF THE TWO-DAY TEST.

As is well known, the method of conducting the milking trials at the London Dairy Show, is to weigh the milk which each cow produces during a period of 48 hours, and to base the quality of the milk as regards butter fat and solids not fat on the result of a 24-hour test.

Now the accuracy of a short period test depends very largely on two factors:---

- 1. The normal variability of the yield of milk, fat, and solids not fat.
- 2. The possibility of competitors being able to cause abnormal variations in the quantity or quality of the milk produced during the period of the trials.

### 1. Normal variations in the yield of milk, fat and solids not fat.

By the above heading is meant the extent to which the milk yield (also fat and solids not fat) of a cow under normal conditions oscillates or rises and falls from day to day, e.g., it will be quite obvious that if the percentage of fat in the milk produced by a cow jumps from 3 per cent. on one day to 6 per cent. on the following day, a short period test would be much less accurate than if the fat only varied from 4.0 per cent. on one day to 4.2 per cent. on the following day.

It has long been recognised that the normal variation in fat percentage is very considerable, and references to the literature would be almost superfluous, but real measures of the extent of these variations are not common, and in view of the rapid advances made during recent years in systems of managing and feeding cows, some figures based on recent analysis may be most convincing. It has, therefore, been decided to give in Tables 1 and 2 examples of these variations by a method commonly employed by statisticians which method is recognised as being reliable and also lends itself to calculation for comparison with other data. An endeavour has been made to avoid technical language as much as possible, without losing too much of the underlying facts, so that to those readers who have no interest in figures, the main essentials may be understood if desired.

The figures in Table 1 are approximations based on results from cows under normal farm conditions and tested at every milking for a sufficiently long period to ensure accuracy. The usual mathematical formulæ were employed to calculate the standard deviations and co-efficients of variation.

Table 1.

Showing the co-efficients of variation of the yield of milk, solids not fat, and butter fat of normal cows during the early months of lactation.

	When calculated from						
Variable.	A single milking.	The average of two milkings in 24 hrs.	The average of four milkings in 48 hrs.				
Milk Yield Weight of solids not	6	4.25	3-0				
fat	6	4.25	3-()				
Weight of butter fat	15	10. 5	7-5				

Whether the term "Co-efficient of Variation" is understood or not, two points in the above table will be obvious; the first is that the variability of the milk yield and the weight of solids not fat are very similar, and the second point is that the variability of the weight of butter fat is considerably greater.

A reasonable interpretation of the above figures would be as follows:—If 100 cows (which, over a period of, say, three weeks) each yield an average of 60 lb. of milk per day, the yield of milk on any one day from 50 of these cows will be between 58·3 and 61·7 lb., and 99 of the cows would yield between 53·4 and 66·6 lb.

Needless to say, if we average the yields of two days from these cows, the range within which 50 per cent. of the yields will fall will be less, and in this case would be 58.8 to 61.2 lb., and the 99 per cent. range would become 55.4 to 64.6 lb. From the table given below similar statements may be deduced regarding the variability of the three factors under discussion.

Table 2.

Showing the normal limits of variations of milk yield, solids not fat and fat.

Weight of milk. (Assumed average, 60 lb.)	Weight of solids not fat. (Assumed average, 5 lb )	Weight of tat. (Assumed average, 2·1 lb.)	Percentage of tat. (Assumed average, 3 5 per cent.)
lb.	lb.	lb.	%
			3-15-3-85
		-	2.15-4.85
58 3-61·7 53·4-66·6	4·86 5·14 4·45~5·55	1·95-2·25 1·53-2·67	3·25-3 75 2·55-4·55
58·8-61·2 55·4-64·6	4 9 -5·1 4·6 -5·4	2·0-2·2 1·7-2·5	3·32-3 68 2·8 -4·2
	milk. (Assumed average, 60 lb.)  lb. — — — — 58 3-61-7 53-4-66-6 58-8-61-2	milk. (Assumed average, 60 lb.) solids not fat. (Assumed average, 5 lb )  lb. lb. lb	milk.         solids not fat.         tat.         Assumed average, 60 lb.)         tat.         Assumed average, 2·1 lb.)           lb.         lb.         lb.         lb.

From the above table it will be observed that during short periods milk yield and solids not fat vary but little from day to day, so little, in fact, that it is only in exceptional cases where the yield for one day does not give a valuable criterion of the producing ability. The vield and percentage of fat, however, is subject to considerable variation, and it is evident that in short period tests chance or luck must play an important part in the award of points in this particular section. This is undoubtedly a serious defect in short period milking trials, and the question which arises is: Can any practical steps be taken to remedy or reduce this defect? It is not proposed to offer remedies which affect the principles of Milking Trial points, but simply to make two suggestions with the object of reducing the element of luck in the allocation of these points. The first suggestion concerns the penalty of 10 points deducted from cows, which, at any single milking produce milk which contains less than 3 per cent. of fat. Reference to the last column of Table 2 will show that with cows which on the average yield 3.5 per cent. of fat, 50 per cent. will yield something outside 3.15 to 3.85 per cent. at any single milking, so that quite an appreciable number of these cows will yield less than 3 per cent. of fat at some milkings.

Since our present knowledge of the real causes of the variations in fat percentage is very limited, it becomes an absolute lottery as to which of the above cows will yield milk which is under standard at any single milking.

It is not suggested that a penalty of some kind for cows which persistently yield poor quality milk is undesirable, but that the system of penalisation for poor milk at a single milking may be unjust and can be improved upon.

The solution would appear to be a penalty of any desired severity for cows which yield milk low in fat percentage for an average of one or preferably two complete days.

Perhaps it should be made clear that as the figures in Tables 1 and 2 which relate to single milkings are calculated from "all morning" or "all evening" yields, the practice at the Dairy Show of milking at approximately equal intervals does not reduce the criticism of the present system.

The second possible method for eliminating chance is in respect of the number of tests employed to ascertain the fat content of the milk of each cow. The present system is to base the quality of the milk on samples from each milking for 24 hours only, whereas the Milking Trials cover a period of 48 hours. The increased accuracy of testing the milk for 48 hours instead of 24 hours may be observed from the last column of Table 2 where it will be seen, that assuming cows to be milked twice daily and yielding 3.5 per cent. fat, the 99 per cent. range of a 24-hours test is 2.55 per cent. to 4.45 per cent., and a 48-hours test is 2.82 per cent. to 4.18 per cent. (The range of variation would be lower for the 24-hours and 48-hours test in the case of cows milked thrice daily.) Separate chemical tests for every milking for 48 hours would, of course, be almost impossible, but it is difficult to see any objection to the system of composite samples. The adoption of this system would require a sample to be taken at every milking for the two days of the trials, preserving the samples (e.g., by cold storage, formalin, or some other suitable preservative), mixing a single composite sample for each cow and testing it. An ingenious and apparently satisfactory mixer for the preparation of composite samples is described by Houston (1) and if this apparatus is not entirely suitable there are many other possible methods available. The employment of this system would not only increase the accuracy and value of the trials, but would reduce the testing and calculations involved.

It is not proposed to discuss in detail other known causes of variation, such as the "Effect of Stage of Lactation" and the "Season of the Year" in this article, but attention will now be directed to the second sub-heading, noted in an earlier paragraph, viz.:—

# 2. The possibility of competitors being able to cause abnormal variations in the yield of milk, fat and solids not fat for the period of the trials.

In dealing with this subject it should be mentioned that as a rule the solids not fat appear to vary similarly to milk yield, and very little further observation will be made regarding the solids not fat, since it may be assumed that usually when the milk yield increases or decreases, the weight of the solids not fat increases or decreases proportionately.

The two methods most commonly considered effective in increasing

the milk yield and butter fat percentage in cows' milk for a short period are:—

- (a) Abnormal milking methods, e.g., incomplete milking previous to the test period;
- (b) Nutritional methods, e.g., the feeding of certain types of rations, condiments or drugs; or sudden changes in the food of the cow.
- (a) The effect of abnormal milking methods on the milk yield and butter fat.—The result of incomplete milking on the yields of milk and fat at subsequent milkings has received a considerable amount of attention and study.

The fact that incomplete milking if constantly practised gradually reduces the milk yield of a cow is of no particular interest in connection with Short Period Milking Trials, but the general idea that most of the milk left in the udder of a cow at one milking will be recovered at the following milking needs discussion in connection with the usual showyard regulations regarding the stripping of animals at the commencement of Milking Trials.

Some of the records of the National Institute for Research in Dairying (2) show quite clearly that the day-to-day variation in fat percentage is affected by the milker, even when all the milkers are apparently efficient, which points to the importance of allowing no change in milkers during the stripping and test period of Milking Trials.

Regan and Mead (3) found that leaving half the milk of a cow in her udder at the milking immediately before a two days test, produced an average increase in fat of 0.27 per cent. Also the highest percentage of fat was not always reached at the milking following partial milking, but in 12 cases out of 27 the highest percentage was secured at the second milking after the partial milking. This point is of obvious importance in connection with the Dairy Show Trials.

In the above experiment the increase in milk yield due to partial milking was found to be only 0.766 lb., so that it appears that the fat percentage is more affected by partial milking, than the milk yield. Other workers substantiate most of the above conclusions, and Fitch (4) found that partial milking produced the greatest effect on milk yield at two milkings following the partial milking, that the effect on the yield of butter fat was more prolonged, and that the effect on the butter fat percentage covered a still longer period.

The chances of partial milking increasing subsequent yields appear to approximate 2 to 1.

From the foregoing it appears that incomplete milking is a very potent factor in affecting subsequent yields of milk and milk solids, not only at the milking immediately following but also at milkings further removed, and it is essential that the stripping of cows before short period tests should be thoroughly and carefully carried out.

The importance of this point led the writer to analyse some of the milk yields obtained at the Dairy Show in order to discover whether the present method of stripping was fulfilling its object.

The publication of full details of the analysis is unlikely to serve any useful purpose but the study of the results indicated:—

- (a) That as far as could be ascertained the stripping as carried out at the Dairy Show is generally efficient, with slight variations from class to class.
- (b) That when the times of sampling for chemical analysis were known previous to the commencement of the Trials to be the second day, there were some indications that the milking out during the first day of the Trials was not as thorough as during the second day.

From the foregoing it appears that if the stripping of cows before the commencement of Milking Trials is to be really effective it should be carried out for two consecutive milkings instead of once; and that no change of milkers should be allowed from the first stripping to the end of the trials. Too much vigilance on the part of those responsible for enforcing the regulations regarding stripping would be almost impossible and disqualification for improper stripping in place of the present "deduction of points" is worthy of consideration. If the tests for butter fat are carried out on the second day of the trials, some special precautions are necessary to avoid unfair advantage being taken by some competitors, e.g., if samples for analysis are not taken on the first day of the trials the cows might be stripped by show authorities on that day.

(b) Nutritional methods of affecting the yields of milk and milk solids produced by a cow.—The chief a of this question which has a direct bearing on Short Period Trial are effect which can be produced on the yield and quality of mil's short periods only.

A large amount of endecide the effect of different rations on milk production and publications on the subject are abundant, but the results are somewhat conflicting. Some examples of these experiments are quoted below.

Woodward (5) found that water and minerals taken by cows in varying quantities did not effect the fat content of the milk although the feeding of prickly pears (a food high in water and mineral content) is reported to reduce the percentage of fat in milk, in proportion to the quantity of pears fed.

McCandlish (6) found that a temporary increase in fat percentage was produced by a food high in protein, viz., cotton-seed meal, but the effect did not appear to be permanent.

Nevens, et. al. (7) found that the feeding of certain oils particularly linseed oil, increased the fat percentage in milk, but most of the increases took place during the few days after the changes in food and the experiments did not cover a sufficiently long period to decide the permanence

of the results: these experiments should not be interpreted to indicate that the feeding of any oil to milking cows will increase the fat percentage since Drummond et. al. (8) found that the addition of cod liver oil to a ration low in oil content, had the effect of depressing the fat percentage in the cows' milk.

If a cow is calved down in good condition she is likely to yield milk richer in fat than if she calves in a poor condition (9). The length of time which elapses before body fatness at calving will effect the fat percentage in the milk is doubtful, but probably the effect will be continued until the time when the cow has been reduced to her normal "in milk" condition, which will be decided by her ration, her digestion, her milking capacity or some other limiting factor. It appears, therefore, that under suitable conditions it is possible for fat to be transferred from the body of a cow to her milk, but the evidence showing that fat percentage can be increased by direct feeding is controversial.

Most of the changes which have been found to occur in the composition of milk as a result of feeding certain foods have been temporary in nature, and as soon as the cows had become used to the new foods the composition became normal. Just after a change in feeding, however, there is a general tendency for the fat percentage to become abnormal and a common occurrence is that the milk yield decreases slightly and the fat percentage increases. The reason for this is probably an indirect effect of the new food in disturbing the animal's system and the same result often occurs when a cow is abnormal for any reason other than feeding, e.g., when the animal is "in season" or has developed a slight feverish condition. The effect of these particular causes are very varied, however, and it is stops impossible to forecast what result will be produced on the milk and milk solids. The general conclusion which may be made region g methods of increasing the yield of milk solids by methods of feed. that if such methods exist, those which produce consistent results's 'n not yet been discovered.

### TWICE AND THREE TIME, MILKING.

The introduction of optional three times daily milking at the London Dairy Show has caused much discussion, but whatever arguments may be advanced for or against the new system, it is generally accepted and has been repeatedly demonstrated that the interval between milkings effect the milk yield of a cow. Many persons who are interested in the subject consider that in order to obtain fair competition between cows which are milked twice daily and other cows which are milked three times, a system of handicapping should be introduced.

The increase in milk yield obtained by an extra milking per day is often discussed and expressions of opinion vary between wide limits; in the same way many of the experiments which have been carried out to solve the problem have yielded inconclusive and diverse results. The reason for lack of agreement may be that the effect of more frequent milking involves more than a single factor, e.g., Ragsdale, Turner and Brody (10) suggest that milk secretion behaves in a similar manner to certain chemical reactions which gradually decrease as the accumulated product increases, but it is quite possible that other factors may effect some cows such as the pressure or discomfort which must occur and be more pronounced in the case of some heifers and those cows in which the milk producing impulses are relatively larger than the udder.

In view of the possibility of discussions or decisions in connection with the question of handicapping or correction for thrice-milked cows, further reference to the work of Ragsdale et. al. may be of interest. The experiments quoted appear to have been well planned and controlled, and some definite results obtained. Cows were milked at varying intervals from one hour to 36 hours, and by plotting the results on a chart a definite rate of decrease in milk production was found to occur as the interval between milkings was increased. Extracts from the results show that—

5.0	lbs.	of milk	was	secreted	in 6	hours
6.3	,,		,,	,,	8	,,
7.5	,,		,,	,,	10	,,
8.6	,,		,,	,,	12	,,
9.6	,,		,,	,,	14	,,
10.6	,,		,,	,,	16	,,

Using the above figures as a basis it will be found that the milk yield of a cow in 24 hours would vary according to the interval between milkings as follows:—

Interval between	Calculated yield in	24 hours' vield
milkings.	24 hours.	as a percentage.
Hours.	lbs.	-
6	20.0	116
8	18-9	110
10	18-0	105
. 12	17.2	100
14	16.5	96
16	15.9	92

From this statement it may be inferred that the cows milked three times daily at the Dairy Show (8 hours intervals) should produce 10 per cent. more milk than the cows milked twice daily (12 hour intervals), and if the latter are to be corrected for direct comparison with the former an addition of 10 per cent. should be made to the milk yield.

The effect of shorter milking intervals on fat percentage was also studied, and it was found that provided the milking intervals did not exceed 16 hours, the fat percentage increased as the intervals between milkings were shortened. The actual increase in the fat percentage

when the milking intervals were reduced from 12 to 8 hours was about 20 per cent., but it appears that the factors which govern the relationship between milking intervals and fat percentage may be more complex than is the case with milk yield.

#### LIVE WEIGHTS.

The National Milk Cup and National Butter Cup at the British Dairy Farmers' Association Show are awarded for Milking Trial points calculated in connection with the live weights of cows. The fact that the method of award appears to favour the smaller cows (11) does not need discussion here, but in view of the great variations which occur in the live weight of a cow from hour to hour (12) some remarks which may aid competitors and Show authorities to avoid some of these variations, may add to the reliability of the results.

When weighing their cows, the object which all competitors will desire (in an endeavour to win the cups mentioned above), will be to reduce the weight of their cows to their lowest possible limit. As a legitimate means of attaining this, abstinence from food and water for three to four hours before weighing is suggested. If a longer fasting period is attempted there is unlikely to be any appreciable reduction in weight and the subsequent milk yields may be affected.

A reasonable method of weighing the cows might be that the Show authorities should notify competitors the approximate time when each class will be weighed, so that all competitors are on the same footing as regards taking advantage of reasonable methods of weight reduction.

#### THE BLEDISLOE TROPHY.

As this is probably the most coveted trophy at the London Dairy Show no further excuse is needed for reference to the method of awarding. The present system is to total the Milking Trial points of the six highest scoring animals in each breed and to add points for inspection. There are two criticisms which can be made.

- (a) The smaller breeds stand very little chance when competing with breeds of nearly double their size.
- (b) The points awarded for Inspection appear to lack a sound basis.
- (a) Size of Breeds.—In most instances it is probable that the large animal is a more economical producer than the small animal, but there can be little doubt that both large and small cows have their uses under certain conditions. If the principle of an allowance to balance the effect of the size of the various breeds could be adopted, it would be quite feasible to introduce a correction factor which would bring the smaller animals on a more equal standing with the larger breeds. The best correction factor would probably be one based on the surface area of the animals with a small allowance to counterbalance additional costs other than food, which may be fairly chargeable to the smaller cows.

Inspection Points.—The chief objection which is raised against the Inspection points awarded in connection with the Bledisloe Trophy is that a breed which sends only six representatives to the Dairy Show is almost certain to obtain the maximum points, irrespective of the standard of animals shown, whereas the breed which sends 10 to 20 representatives seldom obtains more than 50 per cent. of the Inspection points. As a suggestion to overcome this defect the following method appears to the writer to deserve consideration.

The animals to compete for the Bledisloe Trophy to be the first three or four animals in the Milking Trials and the first three or four animals on Inspection. The Milking Trial points obtained by all these animals to be totalled for the final Breed score. In the event of the same animals winning the Milking Trials and Inspection prizes the points for these animals would be counted twice.

The chief effect of the system would be that the points awarded for inspection would be in proportion to the milking qualities of the animals which are considered of the best type for the breed, and the entry of more than six cows in a class would certainly not lower the chances of high inspection points. Another important point, however, is that the proposed scheme still further penalises the smaller breeds and, therefore, would not be an improvement unless adopted in conjunction with a correction for the size of the cows.

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### DAIRYING IN CHINA.

By REGINALD GRANT.

Generally speaking there is no dairying industry in China with the exception of town dairies established in the Treaty Ports and the larger holiday resorts. Upon these the foreign residents and visitors depend for supplies of fresh milk and cream.

Missionaries have also established some stock-breeding centres in various parts of the interior, chiefly run on experimental lines to demonstrate both the value of milk as an article of food and also the advantages of crossing native cattle with imported animals. The Chinese, however, are not greatly interested in milk production, as few natives will consume fresh milk unless they have been for some considerable time in contact with the foreigner. It is probable that it will be many years before milk will be regarded as an everyday article of diet by any but a very small number of the Chinese. The increasing demand, however, from Chinese residents in the Foreign Settlements for cows' milk from reliable dairies indicates that in course of time, and where conditions are at all favourable, the wealthier classes of Chinese will become regular consumers. The Japanese are fast becoming a milk drinking race, and given equal opportunities there is little doubt that the same demand would, in course of time, develop in China. It is an interesting fact that it is almost always possible to purchase tinned milk in the interior even in very remote localities. Also the demand for imported butter and cheese is steadily growing, more particularly the former. Very considerable quantities of the best Australian butter is now imported.

The Chinese produce and consume small quantities of Water Buffalo milk. This milk is very rich in fat, frequently containing as much as 17 per cent. The milk of the native cow is also very rich in fat, but she seldom, if ever, produces more than is sufficient to rear her calf. A considerable amount of mare's milk is consumed by the Chinese, it is usual for the pony mares with foal at foot to be led from house to house and milked in the presence of the customer.

The factor that will always prevent milk production becoming an extensive industry in China is the difficulty in inculcating the most rudimentary principles of cleanliness and sanitation. As an instance, it is impossible to make the native milker understand the necessity of using clean utensils, he will not hesitate to use milking pails for washing clothes or any other domestic purpose, further he has no conscience qualms about adulteration. In one instance a native dairyman worked up a very lucrative small business with foreign residents, his proceedure was to lead his cow from house to house and milk the quantity required into the receptacle provided by the consumer. It was eventually discovered the milk supply from the cow was skilfully augmented by means of a rubber hotwater bottle carried under the coat and a rubber tube passing down the sleeve into the milker's hand

House servants are frequently guilty of adulterating milk after it has been delivered. They have, as a rule, two reasons for doctoring the milk, either they have acquired a taste for milk themselves or else the dairyman supplying the household does not pay the cook sufficient "squeese" it being an understood thing in China that the servants get a commission on all the householder's purchases.

The coolies employed for delivery of milk will always if any opportunity occurs endeavour to make two bottles of milk into three. These small difficulties are sufficient to indicate the difficulties one has to tackle in trying to provide a reliable pure milk supply.

Shanghai being by far the largest of the Treaty Ports with a very large foreign population has tackled the problem of a satisfactory milk supply with very considerable success, in the writer's opinion the milk supply, although not always equal to the demand, is as good in quality and cleanliness as that of any other city in the world.

The problem had been enjoying the attention both of the Municipal Health Department and the public for some very considerable time, with the result that a Pure Milk Commission was appointed to consider the whole question. All available evidence was collected and most carefully sifted with the result that the Municipal Council issued new and stringent licence conditions. Under the new conditions all dairies were obliged to bring their herds, buildings and equipment up to what is designated the "Grade B" standard. Dairies whose equipment and produce was in advance of these requirements were permitted to apply for a "Grade A" licence, and all dairies failing to comply with the grade B requirements were closed and their licences withdrawn.

The following is a brief summary of the licensing conditions:--

All buildings to reach a required standard of cleanliness, ventilation and sanitation.

Plans of new buildings have to be submitted for approval. Very special attention is paid to lighting and ventilation, drainage, &c.

Special regulations for the removal and disposal of dung are strictly enforced.

All animals in the herd have to undergo veterinary examination twice per annum for Grade B, and quarterly in the case of Grade A licences. The veterinary surgeon to be approved by

the Municipal Council. The cost of veterinary examination is borne by the licensee.

A register of all animals with identification marks and numbers has to be kept, and is subject to inspection by the Public Health Department.

All animals discarded dead or alive have to be disposed of in a manner approved of by the Commissioner of Public Health.

The staff employed are subject to medical examination.

Milk has to be cooled to a temperature of 45°F. within 30 minutes of milking. In the case of Grade B dairies the use of artificial ice is permitted for this purpose, and Grade A dairies are required to instal a cold storage plant for cooling and storage purposes.

Covered or hooded milking pails are compulsory and adequate steam supply has to be provided for the sterilization of all bottles and utensils.

Where milk is pasteurized the Holder method is insisted upon. Time and temperature records of all milk pasteurized being kept.

The result of these regulations, the foregoing being a very brief summary, is that the milk supply of Shanghai now shows that a very high standard has been reached. The bacteriological content being very low indeed. A state of affairs very satisfactory both to the producer and consumer.

The writer has during the past four years been associated with the largest dairy in Shanghai, the directors of which have aimed at supplying milk that could safely be drunk without the consumer having to boil it. People with any knowledge of the conditions in the Far East will readily understand that this is a somewhat formidable and also a very expensive task.

The problems to solve in order to attain this result might be tabulated as follows:—

- 1. An adequate supply of healthy cows of desirable dairy herds.
- 2. Suitable housing and feeding.
- 3. The establishment of adequate veterinary routine to (a) protect the herd from rinderpest, and (b) other diseases.
- 4. The recruiting and training of suitable native labour with provision for continuous foreign supervision.
- Selection and installation of suitable machinery and equipment.
- 6. Distribution and delivery.
- 7. Office work and administration.

These problems were investigated in the foregoing order.

The dairy having grown from very small beginnings where just a few cows were kept to supply the owner and his friends, the question of obtaining satisfactory cows has been a difficult one. Local supplies were both very limited and unsatisfactory. Native cows being to all intents and purposes useless for dairying. The cows producing only sufficient milk to rear their calves. Foreign cows reared locally could at times be bought, but usually these were of very mediocre quality. These sources of supply having been investigated, it was decided to purchase and import from abroad. Shipments from Japan were not satisfactory, though the short voyage has many advantages. Shipments from Australia were then tried and some very good animals of the Ayrshire and Illawarra types were obtained, the average, however, was not satisfactory and it was decided to purchase a shipment of good commercial Avrshires from home. In October, 1922, 40 in-calf cows and heifers and two well bred bulls were landed in Shanghai, 11 of the cows calved at sea, and the animals were on board for 48 days and landed in excellent condition. These animals gave such satisfactory results that a further shipment of 72 animals was imported the following year. As a herd the Ayrshires have withstood the climate, resisted disease and have made very satisfactory milk records. Subsequently, further shipments have been made from British Columbia, in this case Friesians have been purchased, one of these, a heifer, established the dairy record, producing 70 lbs, of milk per day.

The herd now comprises in round figures 60 per cent. Ayrshire and Ayrshire crosses, 20 per cent. Friesians, and 20 per cent. mixed cross-breds, including several Jerseys. The herd strength now numbering about 350 animals.

Housing.—The local regulations provide for adequate lighting, air space and drainage, but owing to the very wide range of temperatures varying from 104°F. in summer to 16°F. in winter, special provision has to be made in the construction of byres. The best results are obtained where the byres run east to west, the south sides of the buildings being made of removable wooden shutters. By removing these shutters in the warm weather the cows get the full benefit of the southerly breezes from the summer monsoon. In winter the shutters are fixed, covered with paper, and the paper covered with bamboo-matting. This method of closing the byres in winter entails a certain amount of labour and expense. In the coldest weather all in-milk cows are rugged.

Feeding.—Modern principles of feeding are carefully followed in balancing up the ration. The starch equivalent and albumenoid contents of all available feeding stuffs is ascertained and the most economical ration is worked out. Unlike most other countries it is difficult to get starchy feeding stuffs produced locally, while as a rule, beans of several kinds and decorticated cotton-seed cake is always

available. The provision of adequate bulk feed is also a very difficult problem. In Shanghai rice straw is the only bulk feed that can always be obtained. This is fed ad lib. all the year round, and stock are bedded on this commodity. The method of feeding is as follows: A maintenance ration for the whole herd is weighed out and mixed in large concrete vats with water, in winter the mixture is warmed with steam. The maintenance mixture is fed in the form of a sloppy mash just before milking, three times daily. To the maintenance ration 2 lbs. of production ration in the form of meal is added for every 5 lbs. of milk produced.

Green-feed, viz., grass (so-called) in summer and carrots in winter are fed after milking. There is absolutely no pasture available in or near Shanghai, and the Chinese cultivate every foot of land. The grass and weeds, outer leaves of cabbage are brought to the dairy and purchased by weight. This greenstuff is probably of very low feeding value, but the stock seem to eat almost any green food with great relish.

Cows are milked three times daily, the first milking being at 2.30 a.m., the milking intervals being as nearly as possible eight hours. Milk is weighed from each cow at each milking and careful records kept.

Veterinary supervision of the herd is constantly maintained, a veterinary surgeon seeing the herd daily. The temperature of every animal is taken daily and reported at once if abnormal. The main object of this work is for the purpose of spotting rinderpest in the early stages, in this dread disease the thermometer is the only means of detecting the commencement of an outbreak. A hypodermic injection of serum in the early stages of the disease followed by further injections, if necessary, is the only hope of saving the animal.

Rinderpest is nearly always present in Shanghai, more especially during the colder months. In the past it has been the worst difficulty that the dairyman had to face. Epidemics frequently cause a loss of 80 per cent. of the non-immune animals, where the vet has not been called in time.

Other diseases of cattle occur in Shanghai in much the same proportion as in other countries, next to rinderpest the dairyman's most serious problem is contagious abortion. Immediate isolation and disinfection is apparently the most satisfactory way of dealing with this disease. The fact that all animals are stall-fed all the year round and under constant supervision ensures that cases of sickness are usually quickly detected, and apart from rinderpest the bill of health is better than it is with average commercial dairy herds at home.

Labour, compared with Europe, is plentiful and cheap, but requires careful training and handling, with constant trained foreign supervision, if satisfactory results are to be obtained. As elsewhere, the cost of labour is rapidly rising. The present chaotic state of China is constantly raising the cost of rice, necessitating a rapid rise in wages if serious labour trouble is to be avoided.

In the writer's opinion all milk in the Orient should be subjected to pasteurization. The lcw temperature Holder Method has given most satisfactory results during the past three years. The milk so treated has gained the confidence of the public; and the results of tests made by the Public Health Department (on this milk), both analytical and bacterial, have been most satisfactory.

Milk is delivered in American standard milk bottles twice daily by means of hand-cart. All bottles being filled and sealed with cap and ring mechanically. The cap on the bottle bearing the day of production.

Office routine and administration requires little comment. Retail dairying always entails here and elsewhere a very detailed system of book-keeping. Customers' accounts being posted monthly.

# INTERNATIONAL DAIRY CONGRESS, 1928.

By LORD KENYON, K.C.V.O.

INTERNATIONAL Congresses or Conferences seem to be popular nowadays, and at the moment an International Conference on Poultry Keeping is being held in Canada. Nations seem to be willing to impart and receive knowledge that some years ago would have been retained for their own profit. Thanks chiefly to the British Dairy Farmers' Association the opportunity of holding the 1928 International Dairy Congress in England is to be seized. H.M. The King patronizes it and Mr. Neville Chamberlain and the Hon. Walter Guinness, respectively Ministers of Health and Agriculture, are joint Presidents. Seven Congresses have been held abroad during the past 24 years under the auspices of the International Dairy Federation, and most if not all of these have been attended by British delegates. It, therefore, seems reasonable that we should act as hosts in our turn.

There cannot, I think, be any doubt that much instruction has been circulated and benefit given by previous Congresses. They have resulted in better relations between nations, great advantages to all sections of the dairy industry and improvement in public health. I believe an increase in the consumption of milk has followed a Congress in the country in which it has been held, so we may hope that, as we are far behind other civilized countries in the percentage of milk drunk per head, a like result may occur here.

Only the broad outline of a programme has been arranged. Some four days at the outset will be devoted to the reading of papers, and discussion thereon, in London. These papers will be given by selected men of admitted authority on subjects, chosen by a Committee as specially important to the Dairy Industry as a whole. On the afternoons of the first week visits will be arranged to various farms, factories and distributing plants within easy reach of the Metropolis. Opportunity will be given in the next week to visit Reading, its Dairy Institute and experimental station, the Royal Show at Nottingham,

and the Midland College, while it is hoped also to extend excursions to Scotland and Ireland. We shall try to show our visitors as much as possible, while we may hope also to glean information from them.

It is felt that the Congress cannot fail to be of permanent benefit to the Dairy Industry as a whole by focusing public attention on the value of milk and milk products as a food, and the advantages to be gained by their increased consumption, for in no country has the consumption point been reached, which, in the interests of public health, is scientifically recognised as desirable. All of us as consumers and some of us as producers and distributors are interested in the Dairy Industry, so we appeal to all to help to make the Congress a success to the utmost of their power. Already intimation has been received from the United States and from Canada that a very large contingent of delegates intend to be present. It is confidently hoped the other Dominions and Colonies will rally to their Mother Country. It is interesting to note that at this early date enquiries have been received from Japan and South America.

To welcome our guests in the same generous fashion that our delegates have hitherto been received, the Committee will make a wide appeal for funds, in the confident assurance that they will be supported in their effort to make this at least as effective a Congress as any that have preceded it.

KENYON, Chairman General Committee.

January 12th, 1927.

# BACON PIGS, BACON AND HAMS, DAIRY SHOWS. 1925-6.

By W. J. Grant.

THE value and importance of the Classes for Bacon and Hams at the Dairy Show is increasing at each succeeding Show and gives an opportunity to the enormous number of people who visit the Dairy Show each year to grasp the plain practical fact that the finest and best bacon which it is possible to produce, is still, as it should be, bred, reared, fed and cured in the Old Country.

In the classes for Bacon and Hams, the actual total number of entries for 1925-26 are nearly equal, but at the same time, one feels with regret that notwithstanding the liberality of the prizes offered, some of the classes, both in the Dairy Shows of 1925-26, either did

not fill or had, from want of appreciation to be deleted.

It is unfortunate that the Midland and Northern curers would not compete in the two classes provided for bacon that is both popular and commands the market in the North Midlands—i.e., Pale Dried Hamless Sides, English Shoulder Belly, not exceeding 50 lbs. a side, and the other class—Four Hamless Special Cut Sides, not exceeding 45 lbs. each side, Spring or Winter Cure. In either class, it was hoped, bearing in mind the fine exhibits that for many years came to the Dairy Show from Carlisle, that the Northern curers would have appreciated the effort made on their behalf.

The inducement to our Scotch friends to exhibit Rolled Bacon, met with no response. Are our Ayrshire friends taking time to consider—they were for a mighty long time chewing the cud of reflection before they sent their cows to the Dairy Show. Truly, their long

consideration has had its reward!

It seems a pity and a great mistake that in the many counties in England and Wales where therefare such numbers of small farms and small holdings, no attempt is being made by those who could and those who should, to encourage and assist such occupiers, to cure and exhibit hams in the special class that is provided for them. The same remark applies to a similar class for women who are members of women's institutes. Bearing in mind the enormous amount of money that is being spent on education, surely the time has come for all of us to realize the stern but simple fact that the surest way to appeal to every mortal is through his pocket!

It will be seen from the entries tabulated, the increase from four to thirteen entries in the class for Four Sides of Colonial Bacon, the colonial bacon exhibited at the Dairy Show of 1926 was by far the best lot that has yet been shown in the Gilbey Hall from the colonies, but at the same time, I noticed in almost every entry, one or more

sides spoiled by seedy cut or bad belly.

The hams in the Selling Class in 1925 were not by any means up to the quality that should have been staged in this class, while the hams in the same class, 1926, although less in number, were with a few exceptions an excellent example of what English hams should be.

In the Bacon Classes for both the Dairy Shows of 1925-26, all the exhibits were excellent and more than justified the well-earned

reputation of each competitor.

The Ham Classes were varied, both as to type and character. Some of the hams were of the highest order of excellence and on the other hand, hams were put up for competition that did not deserve the space they occupied.

Number of entries in the classes for Bacon and Hams at the

Dairy Shows, 1925-6, were as follows:

Dairy Shows, 1925-6, were as follows:—		
Bacon—	1925.	1926.
Pale Dried—Four hamless sides, English shoulder		
belly of spring or winter cure, weight of side	0	
not to exceed 50 lbs	2	
Pale Dried-Four hamless special cut sides of		
spring or winter cure, weight of side not to	2	
exceed 45 lbs	Δ	
Owing to the very poor entries for the liberal money prizes offered, the above two		
classes were withdrawn from the 1926 prize		
schedule.		
Smoked Bacon—Four sides mild cured in Wiltshire		
style with ham attached	7	9
Pale Mild Bacon—Four sides mild cured in		
Wiltshire style with ham attached	6	8
Bacon and Hams Smoked and Pale Dried-Two		
sides of bacon smoked and two sides of bacon		
pale dried and two hams smoked, and two		
hams pale dried, the weight of the sides not		
less than 56 lbs. and not more than 68 lbs. each,		
the hams not less than 12 lbs. or more than	_	,
20 lbs. each	5	4
Colonial Bacon—Four sides	4	13
HAMS— Pole Dried Form hours language of seinter a services		
Pale Dried—Four hams, long cut of winter or spring	7	7
cure not les 14 lbs. weight  Pale Dried—Four hams, long cut of winter or	•	4
spring cure, over 14 lbs. weight	9	8
Smoked Hams—Four hams, long cut, mild cured,	J	
not over ten weeks cured, not over 15 lbs.		
weight	7	6
Pale Dried Hams-Four hams, long cut, mild cured,	-	-
not over ten weeks cured, over 15 lbs. weight	8	7
Ham cured in the Farmhouse or Home—Dealers		
and Professional Bacon Curers not eligible	3	0
Ham, Home Cured, open only to members of		
Women's Institutes	3	-
Selling Class for Hams, any variety, two hams	13	8
		Native provide
	76	70
	===	

Six pigs of any pure breed to be killed and cured 1925. 1926. at Messrs. C. & T. Harris, Calne, Wilts., and afterwards exhibited as cured bacon, at the Dairy Show (1925, 24 pigs), (1926, 30 pigs) ... 4 5 Two pigs of any pure breed (1925, 20 pigs) (1926, 18 pigs) ... ... ... ... ... ... ... ... 10 9 Two pigs, "First Cross" (1925, 10 pigs) (1926, 20 pigs) ... ... ... ... ... 5 10

The three classes that are of outstanding importance in the Bacon and Ham department at the Dairy Show are those for the six pure bred pigs, two pure bred, and two pigs from the first cross, the pigs having been sent to Calne, Wilts., for the purpose of being all killed and cured at the same time by Messrs. C. & T. Harris, who since the creation of these classes, have in the most painstaking and thorough manner carried out the whole process, from killing the pigs to delivering the cured sides in the Gilbev Hall at the Dairy Show.

The pigs sent for the 1925 competition were on the whole a good lot. In the pure breds the outstanding improvement, both from a bacon curers and a breeder's standpoint, was to be found in the Gloucestershire Old Spots, the Large Blacks were on the small side, but of fine quality. Berkshires were small, but of excellent quality and were good weighers for their size, while the Wessex were all that one could desire as to size and quality, but in the class for six animals the majority were gilts. The Large Whites did not seem to have matured as bacon pigs in a given time, as the other pure bred pigs did. In the class for cross-bred animals, all were ideal bacon pigs, Lord Bledisloe's pair of Large White and Large Black being first, and Mr. H. H. Pickford's pair of the same cross following. In passing it is interesting to note that these four animals when killed and cured confirmed the impressions formed of them when alive.

The 30 pigs sent for the purpose of competing in the class for six pigs of any pure breed at the 1926 Dairy Show, were considered the best lot of pigs entered for this class. It is also a notable fact that in 1925 there were six animals having seedy cut, but in 1926 the

judges could not find a single side affected with this fault.

The first cross pigs, as in 1925, were a real good lot. Mr. H. H. Pickford's excellent pair, and Lord Bledisloe's of the same cross as the animals they exhibited last year. Large White and Large Black were first and second, thus we find these exhibitors change places,

but win with animals of precisely the same cross.

The Council of the British Dairy Farmers' Association, feeling that it was their duty to do all that was within their power to further the industry of pig farming, which is so closely associated with that important industry of the dairy farmer, cheesemaking, decided that instead of paying the breeders and feeders of the pigs sent for competition after the next Dairy Show, the pigs should be paid for at market price immediately after being killed so that the exhibitors should promptly receive the full current value for their animals as bacon pigs.

Exhibitor's Name.	Entry No.	No. of Pigs.	Breed.	Averag	e Age.	Average Live Weight.		Dead Weight.
CLASS 82. Large Black Pig Society Wessex Saddleback Pig Socy. British Berkshire Pig Society Gloucester Old Spot Pig Society	1013 1014 1015 1016	6 6 6 6	Large Black Wessex Saddleback Berkshire Gloucester Old Spots	Months. 6 7 6 6 6	Days. 13 3 27 14	lbs. 198·5 200·0 145·3 204·8	lbs. 1191 1200 872 1229	1bs. 938 947 673 987
CLASS 83 Major-Gen. R. I., Mullens, C.B. J. Pierpont Morgan J. Stanley Corby A. Hiscock W. White & Sons Bennett & Howard Spencer, Son & Hancock	1018 1019 1020 1021 1022	2 2 2 2 2 2 2 2 2	Large White	7 7 8 6 7 6	2 7 27 23 7 8	191.5 174.5 211.5 187.5 190.5 209.0	383 349 423 375 381 418	291 273 335 299 295 339
CLASS 84. Lord Bledisloe, K.B.E. Major-Gen. R. L. Mullens, C.B W. White & Sons Australian Farms Training Col Herbert H. Pickford	1026 1027 1028 1029 1030	2 2 2 2 2 2 2	Long White Lop-eared  Lar. White & Lar. Black Mid. White & Lar. White Lar. White & Mid. White Lar. White & Lar. Black Lar. White & Lar. Black	6 7 6 6 6	2 23 21 4 22	204·5 160·5 181·5 177 0 204·5	377 409 321 363 354 409	314 251 277 277 314

# Dairy Show,

Exhibitor's Name.	Entry No.	No. of Pigs.	Breed.	Averag	e Age.	Average Live Weight.		Dead Weight.
CLASS 82. Essex Pig Society Gloucester Old Spot Pig Society	1	6	Essex Gloucester Old Spot	Weeks. 31 31	Days.	lbs. 190 · 5 237 · 8	lbs. 1143 1427	lbs. 881 1137
Large Black Pig Society Wessex Saddleback Pig Society	1050 1051	6 6	Large Black Wessex Saddleback	31 31 ap	prox.	207·8 186·6	1247 1120	973 865
CLASS 83.  Major-Gen, R. I., Mullens, C.B. J. H. Ismay W. H. Middle  Spencer, Son & Hancock Standen Estates, Ltd. J. Rackley & Sons Bennett & Howard	1053 1055 1056 1057 1058	ପ ପ ପ ପ ପ ଧ ଧ ପ ।	Large White	31 29 31 29 31 29 30	4 5 3 5 2 4	175·0 170·5 194·5 176·0 172·5 205·5 215·0	350 341 389 352 345 411 430	271 266 308 269 267 336 344
CLASS 84. Bledisloe Farms, Ltd Major-Gen, R. I., Mullens, C.B. J. A. de Rothschild Major J. A. Morrison J. H. Ismay H. H. Pickford Hasler & Co. D. B. Rose A. Duckham	1062 1063 1064 1065 1066 1067 1068	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Lar. White & Lar. Black Mid. White & Lar. White Lar. White & Berkshire Tamworth & Berkshire Lar. White & Berkshire Lar. White & Lar. Black Large White & Essex Lar. White & Mid. White Long Lop Cornish White and Wessex Saddleback	31 31 31 30 31 31	4 4 3 3 3 - 1	211·0 164·0 198·5 183·0 201·0 212·0 208·0 179·5	422 328 397 366 402 424 416 359	344 258 317 276 319 325 329 283
Cathedral Dairy Co	1070	2	Lar. White & Mid. White		4	185.0	370	295

Per cent. Loss Live Weight to Dead Weight.	Bacon Weight.	Per cent. Loss Live Weight to Bacon Weight.	Correct Proportions of Cats or Joints, including Thickness or Streaky.	Suitability of Side, Quality of Meat, Bone, &c.	Fat on Back, Lean Meat, Proportion of Lean to Fat.	Firmness of Fat.	Fineness of Rind.	Seedy Cut (or Black Belly) up to 15 Points.	Total. 100 Points.	Awards,
lbs. 21·2 21·0 22·8 19·6	1bs. 690 704 503 731	1bs. 42 0 41 · 3 42 · 3 40 · 5	30 points 20 20 15 25	20 points 15 18 10 18	30 points 18 20 15 25	15 points 10 15 15 15	5 points 4 5 5 5	5	67 78 60 83	Reserve. 1st,Whitley Cup, Res. Harris Cup.
24·0 21·7 20·8 20·2 22·5 18·8 19·3 21·7	217 201 245 226 218 252 232 216	43·3 42·4 42·0 39·7 42·7 39·7 40·8 42·7	20 18 22 25 18 28 20 20	15 12 15 15 15 20 18 18	20 18 20 22 18 25 22 22	10 12 12 12 10 15	5 3 4 4 5 5	3 3 3 5	67 60 72 75 62 88 80 76	Reserve. 1st, Harris Cup, Beale Cup. 2nd. 3rd.
23·2 21·8 23·6 21·7 23·2	233 191 203 199 236	43·0 40·5 44·0 43·7 42·2	25 20 18 15 25	18 15 15 12 12	22 20 18 15 20	15 12 12 12 12 8	5 5 4 3 5	1 ma	85 72 67 57 76	1st,Bledisloe Cup. 3rd. Reserve. 2nd, Reserve Bledisloe Cup.

# 1926.

	1	ī	[ us us	ſ				I	1	1
Per cent. Loss Live Weight to Dead Weight.	Bacon Weight.	Per cent. Loss Live Weight to Bacon Weight.	t Propo its or Jo ng Thic Streak	Suitability of Side, Quality of Meat, Bone, &c.	Fat on Back, Lean Meat, Proportion of Lean to Fat.	Firmness of Fat.	Fineness of Rind.	Deduct for Bad Belly to 15 Points.	Total, 100 Points.	Awards.
1bs. 22·9 20·3	lbs. 665 842	lbs. 41.8 40.9	30 points 25 30	20 points 16 20	30 points 24 30	15 points 14 15	5 points 5 5	A	84 100	1st, Harris Cup, Whitley Cup.
21·9 22·7	726 646	41·7 42·3	25 20	18 15	25 20	15 12	5 4	8 14 × 2/10 1000	88 71	Reserve.
22·5 21·9 20·8 23·5 22·6	202 198 222 204 194	42·2 41·9 42·9 42·0 43·7	24 23 30 23 20	18 16 20 15 16	25 24 28 20 20	13 14 15 13 12	5 4 5 4	af 15 5010 1 ar 104 30 + N 20 - FN	85 81 98 75 72	3rd. Reserve. 1st, Beale Cup.
18·2 20·0	253 254	38·4 40·9	20 20 25	18 17	22 26	14 13	4 5	Marina Marina Managarina	76 86	2nd.
18·4 21·3 20·1	262 191 243	37·9 41·7 38·7	24 25 24	15 15 16	28 25 22	15 10 12	5 4 5	aterina stesti v	87 79 79	2nd.
24·5 20·6 23·3 20·9 21·1	206 240 239 237 212	43·7 40·2 43·6 43·0 40·9	24 25 24 24 26 30 24 24	15 15 20 14 13	28 25 22 24 25 28 25 23	15 12 10 10 12	4 5 4 5	Manager Manager Manager Manager	82 82 93 77 77	Ist,Bledisloe Cup.
21·0 20·2	213 226	42·5 38·9	22 25	14 16	24 25	10 12	4 5		74 83	3rd.

# ANNUAL REPORT OF THE CONSULTING CHEMIST.

T. J. DRAKELEY, Ph.D., M.Sc., F.I.C., F.C.S.

The number of samples submitted by the members for examination during the year 1926 was small, but were varied in character. Samples of cream were received for the estimation of fat and boric acid, and a number of samples of water were analysed to determine whether they were fit for drinking and dairy purposes. Samples of guano and manures were also submitted for test. However, the majority of the samples were of milk for routine analysis, and most samples were well above the presumptive limits.

For the past two years the Council of the Association has been in communication with the Ministry of Health with regard to the method of reporting analyses of milks by the Public Analysts. It was pointed out that in certain areas the certificate on the summons issued under the Sale of Food and Drugs Acts for a milk containing, say, 2.83 per cent. of fat, and 7.70 per cent. of solids not fat stated that the milk contained 9.4 per cent. of added water, and was 5.66 per cent. deficient in fat. On the other hand, the summonses issued in other districts would merely report such a sample as containing 9.4 per cent. of added water. The omission of any reference to a deficiency of fat was based upon the fact that milk containing 3 per cent. of fat would possess a fat content of 2.74 per cent. after being diluted with the stated amount (9.4 per cent.) of water. Consequently as the actual sample contained 2.83 per cent., there was no evidence of an abstraction of fat as well as an addition of water.

A certificate made out in the former method implies a double offence of abstraction of fat and addition of water whereas the analytical figures only suggest one offence, namely, addition of water.

The Minister, as a result of representations, has in consultation with the Society of Public Analysts issued a circular (No. 752) recommending a more uniform procedure of wording the certificates to show how much, if any, of the deficiency of the fat is presumed to be due to abstraction after allowance has been made for the effect of the added water.

Privileges of Membership.—It should be recalled that the Council of the Association extended in 1926 the chemical privileges of members by materially reducing all the fees for chemical analyses of samples submitted for examination. In addition, each member whose subscription for the current year had been paid was entitled to one analysis of a dairy product free of charge. These increased privileges will remain in operation for the forthcoming year, and should be an additional inducement for farmers to become members of the Association. The full list of privileges will be found on other pages of this issue. The Association naturally needs additional members to support and extend the work it is doing on behalf of the Dairy Farming community.

# THE DAIRY SHOW OF 1926.

By SAMUEL R. WHITLEY.

In spite of many minor inconveniences caused by the Coal Strike, preparations for the Dairy Show to be held October 19th—22nd were well under way, when an outbreak of Foot and Mouth Disease within the 15 miles radius of the Agricultural Hall looked like preventing all cattle from being present, but fortunately there was no second case, and the restrictions were removed just in time.

The Council decided that an inspection of all cattle was desirable, and this was carried out about 14 days before the opening of the Show. For the first time each exhibitor could choose whether his animal should be twice or thrice milked during the 24 hours, and out of a total cattle entry of 420, 161 were entered as Thrice-Milkers, though several reverted to twice milking when the Milking Trials were over. Throughout the Show and afterwards in the Press, the controversy for and against Thrice-Milking raged, and probably the old adage:—

"He that complies against his will, Is of his own opinion still."

is as true as ever.

The Council did not lightly make the change—they knew that it must involve considerably increased expense, and add to the labours of a large staff of Judges and Stewards, whose work is arduous and, of necessity, done under high pressure. They were influenced by the simple fact that cows yielding 7, 8 and 9 gallons in the 24 hours demand milking more than twice if cruelty is to be avoided.

For 50 years the Association has sought to increase and improve the average yield of the Dairy herds of this country by awarding its very substantial prizes to individual animals which show their excellence at the pail, and during that period the Science of Breeding and Feeding has caused the yields of the winning cows to practically double themselves.

Unless the Council made Thrice-Milking optional, they were faced with the rather humourous position of being in danger of seeing a rival Dairy Show started, to cater for those animals which were excluded from their Show because they were giving too much milk.

So far, the Council has expressed no opinion on the Economics of Thrice-Milking in the home—circumstances are so widely different that such a course would be unwise, but the special pleaders who hold that thrice-milking is bad for the constitution of the animal should remember that the calf in nature milks many times in 24 hours and thrice-milking, in spite of all the extra trouble caused, is really one step back towards Nature, and so it is likely to tend towards increased health and constitution of the cow, rather than the reverse.

Each year these Competitions tend to become more complicated

and it is all to the good that skilled advocates should thrash out the pros. and cons. of such questions, pointing out the direction in which this or that action is tending, and so reminding those responsible of their bed-rock aims and purposes.

In another direction the Council are faced with an analogous position by those advocates who hold that cows, to be eligible for the supreme awards at the top Dairy Show, should have shown their freedom from tuberculosis; they point out that a certain number of cows from "Tuberculin Tested" Herds are now unable to compete because they may not mix with untested animals—here again there is the danger of a rival Dairy Show being held for animals, which are too good for the London Dairy Show, because they have shown their freedom from tuberculosis. The Council has discussed the question on many occasions and eventually appointed a strong Committee to make recommendations; these are not yet available.

The pressure on the available space was about as usual amongst the cattle and considerably greater in the produce section. The recent increase in the New Inventions entered for the Society's Medals was well maintained.

#### CATTLE.

The most important parts of the Dairy Show are the Milking Trials and Butter Tests, and full reports of them appear elsewhere in this Journal, but it is interesting here to note that a discussion arose during the Show with regard to the number of mathematical calculations which were involved in making the various class awards in the Milking Trials. The stupendous figure of 13,952 different mathematical operations was estimated to be the total for the Show of 1926. This figure does not include the mathematical calculations necessary for the award of any of the cups or trophies other than the National Milk Cup. That this gigantic task is completed in so short a time and with such extraordinary accuracy bears testimony to the remarkably efficient organisation of the British Dairy Farmers' Association for carrying out the calculations.

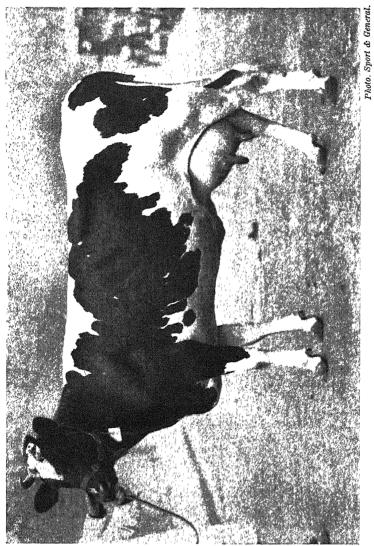
The entries for the three classes for Pedigree Dairy Shorthorns were considerably more numerous than last year, and the greatest strength was in the younger classes.

The Judges agree that the general quality was well up to standard, but it was regrettable that from one cause and another a large proportion of those entered, could not put in an appearance—this remark applies to nearly all the cattle classes—the total entries being about 449 cows, with only 233 present.

The Non-pedigree Dairy Shorthorn Classes were not up to standard in quantity or quality—in the cow class the entries were the same as last year, but the heifer class showed a considerable reduction and only one heifer was able to parade.

The Lincoln Red Shorthorn Classes had entries much the same

as previous years, but both classes were small owing to so many entered not being exhibited. The winning cows and heifers were of a very good type of the breed.



British Friesian Cow "Lavenham Seabreeze," exhibited by Strutt & Parker Farms, Ltd., 3rd Inspection, 1st Milking Trials, The British Dairy Farmers' Association Supreme Individual Championship Challenge Trophy, The "Barham," "Shirley" and "Spencer" Challenge Cups.

The numbers of British Friesians were about as usual, the classes containing some excellent dairy cattle with good udders. For the

first time in the history of this Show a 9-gallon cow put in an appearance—this was Messrs. Strutt & Parker's "Lavenham Seabreeze." She was Third on Inspection, First in the Milking Trials with the wonderful record of 194.5 points, and Second in the Butter Tests, making  $3\frac{1}{4}$  lbs. of butter, and was awarded the Supreme Championship of the Show.

Another extraordinary cow in this class was Messrs. White & Sons' "Muntham Troublesome," which was out of the picture for Inspection, but gave nearly 7 gallons of milk with over 5 per cent. of butter fat, making 3½ lbs. of butter, thus gaining Second Prize in Milking Trials and First Prize in the Butter Tests—what would our fathers and grandfathers have said to such yields?

The Friesian Heifers were more numerous than last year, and

reported on by the Judge as full of milk and promise.

The Friesians eventually won the Bledisloe Trophy.

The entries of cattle from Devon were much as last year, but they suffered disaster owing to the local restrictions against Foot and Mouth Disease—one cow in the South Devon Class managed to get through and scored 165.9 points in the Milking Trials, a score which a few years back would have swept the deck. She was awarded First on Inspection, First in Milking Trials, and First in Butter Tests.

Red Polls put up a very creditable display and are reported as steadily improving their udders and general milking qualities—it was noticeable that the winners came from far and wide, but not from their home, East Anglia. They are spreading and doing their whack

for the Milk Supply.

The two classes for Blue Albions were not large, but of exceptional merit—certainly a credit to the breed after the hard luck which they have experienced at this Show since they began to exhibit—one cow, Mr. B. W. Smith's "Elsenham Jessie," managed to get 156.8 points in the Milking Trials, thus leaving Pedigree and Nonpedigree Shorthorns behind.

There were only 4 entries in the Welsh Black Cow Class, two of

which were present—the Judge reports them as good in quality.

Ayrshires again were well to the fore—what a contrast to 20 years ago, when the writer was one of the Judges of the Milking Trials it was the usual thing then to write them off as "No Award, not up to Standard." Nowadays the number of entries keeps about steady and a superb collection of Dairy Cattle is forward each year. Again it was evident that the Scotchmen meant having a good fling for the Bledisloe Trophy, but after three successive wins, they had to take and place to the Friesians which won solely on Milking Trial points. Nevertheless, the Ayrshire record was a magnificent one, an average of 165-6 points for the first four in the Milking Trials. How much of this splendid achievement is due to the work of the late Mr. John Speir, a much valued member of the British Dairy Farmers' Association Council, who created a real enthusiasm for Milk Recording in Scotland, some 20 years before England woke up to its importance?

Practically all the Ayrshires were milked three times per day in the Trials, but a large proportion returned to twice-milking when the Trials were over. The Ayrshire Heifers were all an excellent lot, and should give the Ayrshire men a good run for the Bledisloe Trophy another day.

Guernsey entries were not quite so numerous as of late, but there was good quality in each of the three classes. The Misses Hargreaves' "Lemon Gadfly" with 148.4 points in the Milking Trials and over  $3\frac{1}{4}$  lbs. of butter in the Butter Tests must have done a record for Guernseys at the Dairy Show. The Judge reports the heifers as a particularly good lot, promising well for the future.

Jersey entries were materially up on last year, and as usual made a really fine display, with some outstanding animals from the breed point of view present. The writer remembers that Jerseys usually were well ahead of Guernseys in Milking Trial points, but the Guernseys are now pulling up and Jerseys must soon look to their laurels.

In some recent years the Kerries have put up strong classes at the Dairy Show, but this year their numbers were rather seriously down, there being only 5 entries in the cow class, but the heifers were one better than last year. The general Dairy characteristics were well maintained, and the points gained in the Milking Trials were distinctly good—the cow class averaging over 5 gallons; the heifers were a very good lot.

The Dexter Heifer Class had to be cancelled through lack of entries, and the cows were only half last year's number, but the First prize cow was very good, with the Second Prize a useful animal.

#### Bulls.

The total entries of Bulls fell from 37 in 1925 to 28 in 1926—the falling off was mainly in the class for young Dairy Shorthorn Bulls.

That the Bull entries should tend to decrease is hardly surprising considering the poor quarters allotted to them -a suggestion, that the ordinary classes for Bulls be eliminated and the money devoted to an extension of the "Robert Mond" Challenge Shield idea, viz., judging Dairy Bulls by the milk yield of their progeny, has been before the Council and stands to be favourably considered for the 1927 Show. Four good animals out of six entries were forward in the Shorthorn Class for Bulls born prior to August 1924, and the Judges speak very favourably of those present in the Class for young Shorthorn Bulls.

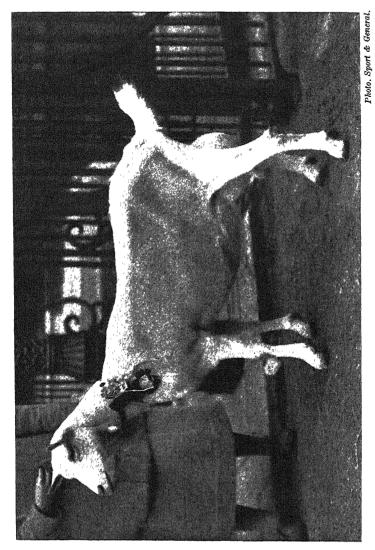
Two good Bulls appeared in the Class for Friesians—the winner showed style, strength and size and the Reserve was but little behind.

Two Red Poll Bulls were judged and both considered worthy of being put into the prize-money.

Of seven Jersey Bulls entered four appeared before the Judge, and were highly thought of—the First Prize being particularly good about the neck and shoulder—with good length and a well set tail.

#### GOATS.

During recent years the number of Goats entered has shown some tendency to decline, but at this Show there were 78 entered



British Saanen Goat "Atherstone Collette," exhibited by Miss C. A. M. Booth, 1st Inspection, 1st Milking Trials, the "Baroness Burdett-Coutts," "Tremedda Selene," and "Dewar" Cups, and "Dewar" Trophy.

against 48 in 1925, the bulk of the increase was in the "recorded" class, which had to be cancelled last year. Though 20 were absent

owing to the Foot and Mouth Disease scare and illness, the Judge reports a very good Show of Goats and Goatlings. The best Goat in the Show was Mrs. Abbey's "Didgemere Dream" winning the British Goat Society's Ten Guinea Perpetual Challenge Cup and along with two other of Mrs. Abbey's Goats, "the Riding Cup." The Judge suggests, "that Goats over two years old should only be allowed in the Inspection Classes at the Dairy Show, if they have competed in the Milking Classes. This would be coming into line with the cows.

#### CHEESE.

There was a record entry of Cheese and the increase was largely amongst the bulky varieties, so considerably more space was required and they could only be staged with difficulty—the Gilbey Hall was so crowded that it was impossible to stage the Dead Poultry there and room had to be found for a large exhibit of Dead Poultry in the Galleries, thus reverting to an old custom, though hardly a desirable one as the atmosphere in the Galleries can never be so fresh as that in the Gilbey Hall.

Stiltons.—The number of entries was much as usual—the season is reported as having been a very awkward one, due to the varying temperatures, so the Cheeses generally have not turned out so regular in quality as last season; also the glut of milk has tended towards quantity rather than quality—all things considered, the exhibits were very satisfactory, though not quite so forward in condition as is usual at this time of year—the later made are however showing more promise.

Cheddar Truckles.—A very good exhibit of Truckles, several entries being of exceptional quality, and it was most difficult to place the leaders in order of merit, the First Prize winner being equal to the Champion Cheddar except in appearance.

The class for Cheddar (4 Cheeses) brought an increased entry—they were on the whole a good lot of Cheese and the First Prize in this Class was eventually awarded the N.K.J. Challenge Cup for the best exhibit of Cheddar Cheese—the same Dairy (Mr. S. J. White of Ilchester) had been winning First and Champion at many of the West of England Shows. Scotch Cheddars carried off Second and Fifth Prizes and one Very Highly Commended, while the bulk of the honours went to the West of England. The Class for Cheddars (12 Cheeses) was a large one with 46 entries, but they are reported as rather a mixed lot of cheese, many of them cutting much too firm, not showing enough quality or silkiness in texture, while many were too immature. The bulk of the Honours again went to the West of England.

Colonial Cheddars showed a largely increased entry, but the Judge reports them as on the whole, "not a very good lot," being generally poor in quality and uninteresting, while most of the Cheese

were of good appearance—the only exhibits showing fat were the Prize winners and the commended ones—some of the others were fair in quality, but unclean in flavour.

Cheshire Cheese.—Practically all the Classes show a largely increased entry, and this is particularly noticeable in the class for 12 Cheeses and also in the Novice Class.

The Fullwood and Bland Challenge Cup was won by Mr. O. Hesketh of Winsford, for his exhibit in the 12 Cheese Class.

The class for *Factory Cheese* (10 Cheeses of not less than 28 lbs. each, any variety) brought 9 entries—the winning exhibit came from Scotland, but the bulk of the exhibits were from Shropshire, and the West of England.

The class for *Leicester* (4 Cheeses) was a very encouraging exhibition, the Cheese shown being of excellent quality and condition, it was not an easy matter to allot the awards, the winner came from Rugby, but the Second and Third Prizes went to Educational Centres far distant from the home of Leicester Cheeses.

The class for *Lancashire* (4 Cheeses) brought a slightly increased entry of cheese very typical of the cheese turned out in Lancashire, the samples were very rich, free cheese, open in curd and of good quality suitable for toasting.

The *Derby* class was said to be poor and indifferent, hardly any exhibit presenting true Derby characteristics.

There was a falling-off in the entries of both *Double* and *Single Gloster*, the former contained two very fine exhibits, but some of the rest were sour and hard—on the other hand the *Single Glosters* were a fine class, only weak in numbers; they were true to character and of clean, sound flavour, the First Prize winner being of outstanding merit.

The Caerphilly class had a reduced entry of 14 against 20 in 1925, those awarded prizes were of very good quality and character, but some of the exhibits were not the right shape and verging on Cheddar Loaf.

There was only a poor entry of Wensleydale Cheese, with one absentee—the First Prize cheeses were a very fine lot, uniform throughout, although the true Wensleydale coat had not fully developed.

Both the classes for *Smallholder Pressed Cheese* (Long Keeping and Quick Ripening) were seriously down in numbers—the former were an excellent class, the general appearance and finish being very good—the latter (Quick Ripening) was a good class, but the competition not so keen as in the former class, the First Prize was excellent in flavour.

The class for *Small Cheddars*, open to pupils who have attended County Travelling Cheese Schools during 1925 and 1926, brought a very mixed lot of Cheese, but the First Prize winner was a very nice lot indeed.

The corresponding class for *Small Cheshires* was well filled, but the exhibits called for no special comment.

The Inter-County Competition for the best collection of Small-holder Cheeses had to be cancelled owing to insufficient entries, this is specially to be regretted as a Champion Shield is available in addition to handsome prize money.

The class for Cream Cheese, made from pure cream only, was a good one with 17 entries.

Unripened Soft Cheese, other than Cream Cheese, made direct from milk brought an increased entry, but called for no special mention.

The class open to Women's Institutes for a Collection of Produce brought diminished entries—9 as against 18 in 1925—the purpose of this class is to encourage the sending of farm produce through the Parcel Post, so exhibits had to be sent through the post and were judged on points as they arrived. The exhibits on the whole were well packed, but one package was broken in transit, partly due to its containing a heavy glass jar containing cream—two packages had one egg each broken. The quality of the produce was very good, and in the First Prize lot the butter, eggs and cream were excellent. The Judge endorses a suggestion made by those who understand the difficulties, that if the collection was reduced to 1 lb. of butter, 1 lb. of cream, 1 dozen eggs and a dressed chicken ready for cooking, there would be more entries, as it is felt that the present requirements of 2 lbs. of butter, 1 lb. of cream and 2 dozen eggs is excessive for small farms and holdings at this time of year.

#### BACON AND HAMS.

The entries in the Bacon Classes showed a small improvement, but the new class for Rolled Bacon cured on the farm or in the home had to be cancelled owing to lack of entries -the other classes are reported by the Judges as of very good Bacon, well butchered and smoked-- they also comment on the great improvement shown in the class for Colonial Bacon, the sides being better shaped, heavier and more suitable for the trade of this country.

The Hams were very good, but there was too much bloom on some for the weight and age.

# BACON PIGS.

The class for Pig Breed-Societies (6 pigs to be shown as cured Bacon) brought 5 entries against 4 in 1925. The pure bred class for Individuals (2 pigs to be shown as cured Bacon) brought 9 entries against 10 in 1925. The cross-bred class for Individuals (2 pigs, of the first cross, to be shown as Bacon) brought 10 entries against 5 in 1925.

It is interesting to note that the Gloucester Old Spots again won the Whitley Challenge Cup for the Breed entries, and also the Beale Cup

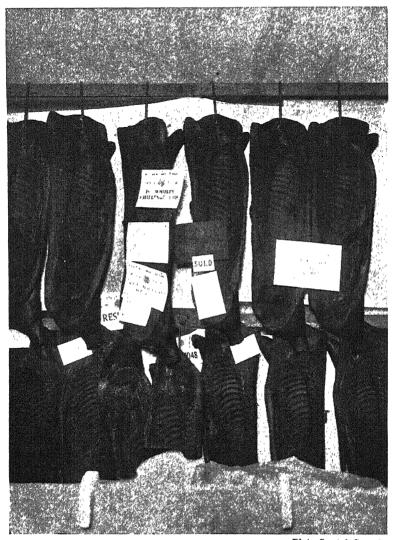


Photo. Sport & General.

Sides of Bacon exhibited by the Gloucestershire Old Spots Pig Society, Winners of the "Whitley" and "C. & T. Harris" Challenge Cups.

for Individual entries of pure breed, while in the Individual first-cross class, the First and Second Prizes again went to the Large White—Large Black Cross.

#### BUTTER.

Speaking generally, the total number of Butter entries compares favourably with that of the post-war Shows, being 10 more than 1925, but 53 below the post-war record of 1924. In the 2lb. classes there is a considerable falling off; in the more commercial classes for 12 lbs., 24 lbs., 28 lbs., and 56 lbs., there is a slight tendency to increase, and in the Colonial classes for one box of 56 lbs., there are very large increases.

The 2lb. Classes of Butter were very good, but with a tendency towards lack of flavour—in the novice class for farmers, their wives and daughters (occupying less than 100 acres) a lack of finish is noticed—in another class the Judge commends the texture and moisture, but finds the appearance the weakest point, with a proportion of the entries distinctly "off" in flavour.

The quality of the various lots of Commercial Butter was very creditable. Some difficulty was experienced in allotting the winners owing to the uniformity of the exhibits. The flavour of these Butters was outstanding, and reflects a high standard of education in the treatment of the cream and also in the practice of Churning.

In the Colonial Butter the bulk of the Exhibits came from Australia with Canada a good second, and South Africa a poor third, New Zealand and other Colonies were unrepresented, practically the whole of the awards went to Australia.

One Judge reports a fair average lot of Butter for the time of the year—nothing stands out as excellent, and very few lots to be graded as First Class, but, of course, best quality is not expected at that time of year.

The other Judge says, the exhibits are practically all of a high standard, the best samples being very close to one another and very little to choose between them; he does not note any outstanding defect, but here and there there is a slight unevenness of colour and slightly watery texture. Packing and condition were mostly excellent.

The class for "Butter made up in most attractive form for table use" brought 11 entries, some of which were overdone and not attractive or appetising; the dishes were overfilled and too much attention given to elaborate decoration, all manner of fancy forms and designs which generally take away from the flavour and cause deterioration, but the First and Second Prize exhibits were good in flavour and neatly made up.

In the class for Fancy or Ornamental Butter there were two exhibits well deserving First and Second Prizes.

#### CREAM.

The entries of Clotted Cream were about normal, but a considerable drop when compared with those of 1925, the quality and also that of the Cream other than clotted, called for no special comment.

#### BOTTLED FRUITS.

The entries show a good recovery to normal numbers after a rather serious drop last year. For general all round excellence they were the best that have yet been staged, and it was very difficult to decide on the winners, packing, grading and general appearance being very fine.

The Demonstrations in Fruit and Vegetable Bottling carried out throughout the Show were as popular as ever, and eventually serve a useful purpose.

## HONEY

The total entries show a considerable increase when compared with last year, but are still only about half those of the record year of 1914, the season was not particularly favourable, so this must considered satisfactory—the bulk of the merease was for Colonial Honey, nearly all of which came from Canada—all the awards, as last year, were annexed by the Ontario Beekeepers' Association.

#### ROOTS.

There was a magnificent display of Roots, the numbers being almost a record. As usual the bulk of the prize money goes to Wales, and one exhibitor Mr. W. Watts, of Ty Draw, Cowbridge, Glamorgan, annexed all the First Prizes for Mangolds, along with a First for Marrow Stem Kale and a Second for the Collection of Roots, in each case he used Suttons Seeds, but one wonders whether it is the man, the farm, the seeds or the manure, which so commands success.

#### NEW INVENTIONS.

These were so numerous and interesting that a special report of them will be found elsewhere in this Journal.

#### JUNKET MAKING CONTESTS.

The popularity of the Junket Making Contests was just as evident as in previous years, and the product sold like hot cakes—why is this method of getting more milk consumed not exploited to a far greater extent?—outside Devonshire the Junket is far too rare.

#### BUTTER MAKING CONTESTS.

Entries were about normal and quite enough for the accommodation, good work generally was done, especially by the prize winners—the novices, not unexpectedly showed some amount of

nervousness—the competition was as keen as ever and the final Championship Contest brought so many entries that it was well-nigh

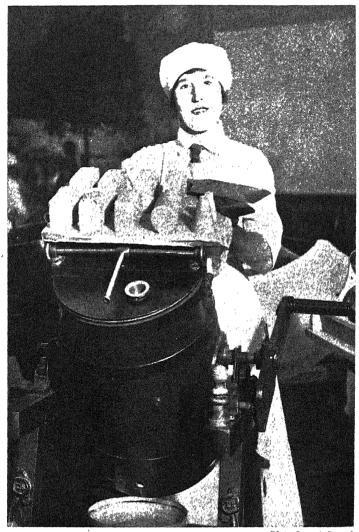


Photo. Sport & General,

Miss J. PRITCHARD, Winner of the Champion Butter-making Contest.

impossible to accommodate them all—it is suggested that the winners of previous years should be more restricted.



Miss N. JONES, Winner of the Championship Milkers' Contest.

## MILKERS' CONTEST.

Covered Buckets and more strict attention to all the details which make for Clean Mılk, do not seem to have frightened away the entrants from these classes, but it has not yet been possible to achieve the Council's desire to make these contests more of an Inter-County Contest.

# Cow-Judging Competitions.

There were 9 entries in the competition open to Students from Agricultural Colleges, Farm Institutes and County Council Classes, being one more than last year—the winners this year were the Cornwall County Council Classes, Truro, with the Buckinghamshire County Council, Aylesbury, reserve.

The Cow-Judging Contest, open to members of the Young Farmers' Clubs, brought 4 entries, and raised a considerable interest amongst the public.

The Silver Challenge Cup was won by the Sussex Baby Beef Club for the second consecutive year.

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# THE DAIRY SHOW MILKING TRIALS OF 1926.

By T. J. DRAKELEY, Ph.D., M.Sc., F.I.C., F.C.S.

THE Milking Trials for the 1926 Show probably aroused more discussion than at any previous Show, and were watched with more than the usually great interest they always evoke. This was due to a decision of the Council that cows might be milked twice or thrice daily at the option of the owners, and that all animals would be equally eligible to compete for the various awards and trophies, irrespective of the number of times they were milked.

Naturally, such a departure from all previous procedure was met with both violent opposition and welcomed acceptance, and the Council, as soon as they have acquired sufficient statistical information, will, no doubt, review the position in order to ensure that the competition between cows milked twice and those milked thrice will be upon an equitable basis. Speaking simply as a Member of the Association, it is difficult to understand the position which exists between those advocating milking twice and those in favour of three-times milking. Thus, at the Annual General Meeting, milking twice was warmly defended on economic grounds, and it was maintained that the awards at the Dairy Show should pick out, not necessarily the cows with the highest yields and points, but those cows which yield milk in the most economic manner. How the scheme was to be worked by the judges was not clear. However, it was unfortunate that at the General Meeting there were no ardent protagonists of the three-times milking, because precisely the same strong principle has been used by them in favour of their methods. Indeed, the writer has heard members of the British Dairy Farmers' Association advance precisely the same so-called "economic" argument in favour of both arrangements for milking, and consequently it would seem that the discussion must be more definitely stated, and that much over-worked word "economic" omitted entirely therefrom before the confusion may be cleared. Indeed, the Council paid much attention to the concrete suggestion that it was almost an act of cruelty to milk the heavy yielding animals only twice daily.

Another innovation at this Show was that the animals milked twice daily were milked at even intervals of 12 hours, whereas on all former occasions the intervals have been 13 and 11 hours respectively.

Allocation of Prizes.—It may be of interest to note that the thrice-milked cows did not secure all the awards in competition with the twice-milked animals, and the following Table gives an idea of the distribution of the prizes between the two sections:—

# ALLOCATION OF PRIZES.

				A	NIMALS	MILKE	D.		
No.	Class.		Twi	ce.			Thi	ice.	
		No. of Animals in Show	1st.	2nd	31d.	No of Ammals in Show	1st.	2nd.	3rd.
$\frac{1}{2}$	Dairy Shorthorn Cow (Pedigree) Dairy Shorthorn Cow	8 11	1	1 1	1	2 4	T O	0	0
3	(Pedigree, 3-5 years) Dairy Shorthorn Heifer (Pedigree)	19	0	0	1	6	ı	1	0
4	Dairy Shorthorn Cow (Non-Pedigree)	6	1	0	0	3	0	1	1
5	Dairy Shorthorn Heifer (Non- Pedigree)	1	N	o awar	d.	0	N	o awar	d.
6	Lincolnshire Red Shorthorn	2	1	0	0	2	0	ı	1
7	Lincolnshire Red Shorthoin Heiter	3	1	0	0	3	O	1	1
8 9 10 11 14 15 16 17 18 19 20 21 22 23 24 25	British Friesian Cow British Friesian Cow British Friesian Heifer South Devon Cow Devon Cow Red Poll Cow Red Poll Heifer Blue Albion Cow Blue Albion Heifer Weish Black Cow Ayrshire Cow Ayrshire Heifer Guernsey Cow Guernsey Cow Guernsey Ifeifer	3 5 3 1 0 0 4 4	0 0 0 1 1 0 0 1 1 1 0 0	0 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 1 1 1	0 0 0 0 0 1 0 0 0 0 0 1 1 1 1 1	16 9 8 1 0 1 3 5 0 1 14 12 2 1	1 1 1 0 0 1 1 0 0 1 1 1	1 0 0 0 0 1 0 0 0 0 0 0 0 0	1 1 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0
26 27 28 29 30 31	Jersey Cow Jersey Cow Jersey Heifer Jersey Heifer Keriy Cow Kerty Heifer Dexter Cow	12 9 11 3	0 1 1 0	1 1 1 1 1 0	1 1 0	1 1 1 0 0	1 0 1 0 0	0 0	0 0 0 0 0
,	Totals	. 136	13	14	12	97	15	10	11
	Total—excluding Classes 5, 11, 14, 18, 19, 21, 22, 25, 29, 30	. 110	7	9	8	70	12	8	9

The Table shows that 136 animals were milked twice daily and secured 13 first prizes, 14 second prizes and 12 third prizes in the Milking Trials. The prizes secured by 97 animals milked thrice daily were 15 first prizes, 10 second prizes and 11 third prizes. These totals, however, include the results of certain classes (Nos. 5, 11, 14, 18, 19, 21, 22, 25, 29, 30), in which there was no competition between the twice and thrice-milked cows. If the latter classes are excluded from the consideration, the distribution gives 24 prizes amongst 110 animals milked twice, and 29 prizes amongst 70 thrice-milked cows.

The Competition.—It has been contended that the competition between cows milked twice and cows milked thrice daily without any compensation in points to the cows milked twice is unfair. This contention may be perfectly true, and as already mentioned, the Council is anxious to place all the competitions upon a fair basis. However, with the data which has been obtained during the 1926 Show, there appears to be no obvious scheme which would equalise the chances of animals milked twice with those milked thrice daily. Thus, the allocation of prizes does not show the anticipated preponderance of success with the animals milked thrice, and a reference to Table III and the last two lines of Table IV will convince all members that no simple means is yet apparent for the adjustment of points which may finally be made between the two sections of animals.

The Council are watching their experiments with keen interest and will take suitable action as soon as they are certain of the facts. In the meantime, patience and constructive criticism will be welcomed from all members.

Award of Points.—The milking Trials during the 1926 Show were carried out on the same general lines as in previous years. The awards were made on the following scale of points:—

One point for every 10 days since calving, deducting the first 40 days, with a maximum of 12 points.

One point for every pound of milk, taking the average of two days' yield.

Twenty points for every pound of butter fat produced.

Four points for every pound of "solids-other-than-fat."

Deductions are made of 10 points each time the fat falls below 3 per cent., and 10 points each time the "solids-other-than-fat" falls below 8.5 per cent.

Number of Entries.—The number of entries was approximately the same as those for the former Show. Thus, 420 cows and 27 goats were entered in 1926, whereas in 1925, the numbers were 434 and 18 respectively.

Of the 420 cows entered for the Show, four entries were withdrawn, and the details of the 416 remaining animals will be found in column 3 of Table I. From this Table, it will be seen that 256 animals were entered to be milked twice and 160 to be milked thrice daily.

Number of Competitors.—The number of animals competing in the Milking Trials reached 246, and comprised 233 cows (136\* + 97†) and 13 goats. The corresponding figures for the last Show were 226 (221\* + 5†) cows and 16 goats. The details of the entries and the number of animals actually present will be found in Table I.

Number of Breeds represented.—Thirteen distinct breeds were represented at the Show. A new class was provided for Blue Albion Heifers (Class 19) and all entries appeared in the Show Yard. One class (32) for Dexter Heifers was cancelled, due to lack of entries.

<sup>\*</sup> Milked twice daily.

Upon reference to Table I, it will be observed that in the classes for South Devon Cows (Herd Book Society) (Class 11), South Devon Heifers (Class 12), South Devon Cows (Recorded Cattle Society) (Class 13), Devon Cows (Class 14), a total entry of 23 animals was received, but only two animals (Classes 11, 14) appeared at the Show. The lack of support of these classes is consequent upon the local regulation prohibiting cattle from entering Devonshire unless they have been submitted to three weeks' quarantine.

One of the animals in question came from Devonshire and it is understood, was only admitted to the home farm after three weeks' quarantine just on the borders of Devonshire.

Highest Points Gained by a Cow.—The highest score of points made by a cow milked thrice daily was 194.5 points gained by a British Friesian Cow, No. 150, whilst a Lincolnshire Red Cow, No. 134, milked twice daily, scored 159.5 points. It may be recalled that the record for an animal milked twice daily is held by a British Friesian Cow, which gained 173.8 points in 1921.

Highest Yield of Milk.—The highest daily yield on the average of the two days for cows milked thrice daily was 95-1 lbs. given by the British Friesian Cow, No. 183. This is the record yield of milk given during any Dairy Show. The milk was, however, deficient in nonfatty solids at all milkings and only exceeded three per cent. of fat in the evening sample. This animal was closely followed by another British Friesian Cow (No. 150), which gave 92-8 lbs. of milk. The milk of this cow was above the presumptive limits for quality at every milking.

The highest yield for cows milked twice daily was 77·3 lbs., also given by a British Friesian Cow (No. 185). This was followed by 76·1 lbs. given by the Blue Albion Cow (No. 264). The record is held by a British Friesian Cow exhibited in 1921, which gave 82·3 lbs. of milk.

The greatest yield of milk at one milking was 40.8 lbs., given by a British Friesian cow (No. 185\*). The milk was also well above the presumptive standard. The record is held by a non-pedigree Dairy Shorthorn, which gave 47.6 lbs. at one milking during the 1921 Show.

Disqualifications.—Animals were disqualified for poorness of the quality of the milk. The ruling which governs this disqualification came into operation first at the 1925 Dairy Show and states that

"Any cow or heifer whose milk for any one milking falls below 3 per cent. fat, and at the same milking also falls below 8.5 per cent. "solids-other-than-fat" shall not be eligible for any awards or trophies on Inspection, in the Milking Trials, or Butter Tests."

Of the animals present at the Show five were disqualified from receiving any award. They included one non-pedigree Shorthorn,

<sup>\*</sup> Milked twice daily. † Milked thrice daily.

three British Friesian cows and one British Friesian Heifer. It should be noted that whereas these animals were not eligible to receive any award, the points they obtained have been included in the calculation of the averages for the respective classes.

#### NOTES ON THE CLASSES.

Class 1. Pedigree Dairy Shorthorn Cow over 5 years old.—Entries 24 (20\* + 4†); present 10 (8\* + 2†). This class did not contain any outstanding animal, and a reference to Table IV shows that cow No. 11\*, milked twice daily, obtained 137.4 points, whilst the highest total for a cow (No. 2†) milked three times daily was 121.2 points. Two animals failed to attain the standard for the class.

The first prize of the class and reserve for the Desborough Cup was won by Messrs. J. Chivers & Sons' cow "Histon Wild Queen" (No. 11\*) with 137.4 points. The second prize was awarded to Mr. J. G. Peels' cow "Backwood Seraphina" (No. 24\*) with 135.7 points.

Class 2. Pedigree Dairy Shorthorn Cow over 3 and under 5 years old.—Entries 30 (25\* + 5†); present 15 (11\*+4†). The cows milked twice daily averaged a lower number of points than at the previous Show. Four\* of the 15 animals failed to reach the class standard. The first prize and Desborough Cup was won by Messrs. Allen & Rogers' cow "Grand Duchess Oxford 30th" (No. 54†), with 146·3 points. The second prize was secured by Mr. R. Tustian's cow "Greattew Blossom" (No. 50\*) with 133·7 points.

The extra prize of £10 offered by the Shorthorn Society in conjunction with the Dairy Shorthorn Association for the cow exhibited in Classes 1 or 2 gaining most points on Inspection and in the Milking Trials was divided between the following four equal winners:—Messrs. J. Chivers & Sons' cow "Histon Wild Queen" (No. 11\*) Mr. J. Pierpont Morgan's cow "Longhills Belle 2nd" (No. 12\*), Mr. L. Hignett's cow "Barrington Lucy" (No. 43\*) and Mr. R. Tustian's cow "Greattew Blossom" (No. 50\*).

Class 3. Pedigree Dairy Shorthorn Heifer.—Entries 42 (33\* + 9†); present 25 (19\* + 6†). This class had a good attendance of 25 animals, but on the whole the results were disappointing, only 12 heifers attaining the class standard and seven animals yielding milk deficient in fat. The first prize was won by Mr. J. H. Ismay's heifer "Iwerne Merry Duchess 3rd" (No. 87†), with 99.5 points, and the second by Major R. F. Fuller's "Chalfield Rose 12th" (No. 57†) with 89.6 points.

The two extra prizes of £5 each offered by the Shorthorn Society in conjunction with the Dairy Shorthorn Association for the two best heifers exhibited in this class gaining most points on Inspection and in the Milking Trials were awarded to Mr. P. R. L. Savill's "Sweet Rosette 11th" (No. 77\*) and Mr. J. H. Ismay's "Iwerne Merry Duchess 3rd" (No. 87†) with 16 points each.

<sup>\*</sup> Milked twice daily. † Milked thrice daily.

Class 4. Non-Pedigree Dairy Shorthorn Cow.— Entries 16 (12\* + 4†); present 9 (6\* + 3†). From Table II it will be observed that the average number of points gained by animals milked twice daily fell from 121·7 points at the 1925 Show to 106 points, and only two of these animals attained the class standard. The average points gained by the three animals milked three times daily, of which one failed to reach the class standard, was only 124·1 points. The first prize was awarded to Messrs. W. & J. Hirons' "Quarrendon Daffodil" (No. 102\*) with 147·3 points, and the second prize to Mr. A. B. Croxon's "Spot" (No. 101†). The latter animal secured the Morrison Trophy for the second year in succession, and also the Dairy Shorthorn Association's Extra Prize of £10.

Class 5. Non-Pedigree Dairy Shorthorn Heifer.—Entries 8\* (one withdrawn); present 1\*. The number of entries in this class shows a considerably falling-off from previous years, and the only animal present failed to reach the class standard of points. Consequently, no award was made.

Class 6. Lincolnshire Red Shorthorn Cow. Entries 14 (8\* + 5† 1 withdrawn); present 4 (2\* + 2†). The number of animals present in this class was exceptionally low, but Mr. S. Reading's "Langford Damsel 21st" (No. 134\*) obtained first prize with the record score for this class of 159.5 points. This animal was also reserve for the British Dairy Farmers' Association's Supreme Individual Championship Challenge Trophy. It may be noted that the cow was milked twice daily. The fat content of the milk was very high. The second prize was awarded to Mr. B. G. Bowser's cow "Scothern Mystic" (No. 125†) with 131.9 points.

Class 7. Lincolnshire Red Shorthorn Heifer. Entries 11 (6\* + 5†); present 6 (3\* + 3†). All the animals of the class obtained points above the breed standard for heifers, and the averages (see Table II) exceed those of the three previous shows. The first prize was secured by Mr. S. Reading's "Langford Polly 21st" (No. 143\*) with 103·1 points and the second by Messrs. J. Evens & Sons' "Burton Buttercup 13th" (No. 142†) with 97·2 points.

Class 8. British Friesian Cow over 5 years old.—Entries 26 (2\* + 24†); present 17 (1\* + 16†). The animals exhibited in this class advanced the remarkably high standard which has been set by the British Friesian Breed in recent years, the average number of points gained by the animals milked three times daily reaching 149·4 points. Only one animal in the class failed to reach the breed standard for the mature cows, but three lost points for milk deficient in fat, and five for milk deficient in solids-not-fat. However, the exceptionally high points obtained secured the Bledisloe Trophy for this breed. The first prize was awarded to "Lavenham Seabreeze" (No. 150†), exhibited by the Strutt & Parker Farms, Ltd. This cow, with the record score of 194·5 points, also secured the Barham, Spencer and

Shirley Cups and was successful in winning the blue riband of the Show, namely, the British Dairy Farmers' Association's Supreme Individual Championship Trophy. The second prize was won by Messrs. W. G. White & Sons' "Muntham Troublesome" (No. 160†) with 169-2 points. One animal was disqualified owing to poorness of the quality of the milk.

Class 9. British Friesian Cow over 3 and under 5 years.—Entries 13 (1\* + 12†); present 10 (1\* + 9†). The animals in this class showed a fair standard of merit, the average number of points gained by cows milked three times daily being 130·6. The first prize was awarded to Mr. C. H. Harding's "Hemsted Ellen" (No. 176†) with the high total of 174·7 points. This animal was also reserve for the Barham and Shirley Cups. The cow milked twice daily (No. 185\*) also gave a remarkably good account of herself and scored 167·1 points, securing second prize. The cow "Iken Lady Graceful" was exhibited by Mr. W. H. R. Gilbert. Two animals in the class were disqualified owing to a deficiency of both fat and solids-not-fat at one of the milkings.

Class 10. British Friesian Heifer. Entries 18 (6\* + 12†); present 12 (4\* + 8†). The standard attained by the animals milked twice daily did not compare favourably with the two former years. In 1925, the average points were 87.9, but the average for 1926 was only 80.9. The average for the heifers milked three times daily was, however, 94.6 points. The first prize was awarded to Mr. E. Hollingworth's "Knebworth Ceres Galatea" (No. 201†) with 127.4 points, and the second to Mr. E. Furness's "Hamels Foliage" (No. 191†) with 125.1 points. A reference to Table IV will show that heifer No. 198\*, although obtaining no prizes, created a record for British Friesian heifers milked twice daily by securing 109.3 points. One animal was disqualified owing to the poorness of one sample of milk.

Class 11. South Devon Cow, entered in or eligible for the Herd Book of the South Devon Herd Book Society.—Entries 6 (2\* + 4†); present 1†. Although only one animal appeared at the Show, it was of outstanding merit, and Mr. W. Hunt's "Milkmaid 9th" (No. 208†), was awarded first prize with the remarkably high score of 165.9 points. The cow was awarded the South Devon Silver Challenge Cup and was also reserve for the Spencer Cup.

Class 14. Devon Cow.—Entries 4\*; present 1\*. The only Devon cow present was Mr. W. D. Chick's "Lovely 4th" (No. 225\*), and was of high standard. The cow was awarded first prize with 113.2 points and secured the "Busk" Perpetual Challenge Cup.

Class 15. Red Poll Cow over 5 years old.—Entries 11 (6\* + 5†); present 7 (6\* + 1†). The animals exhibited in this class were of good quality and provided one animal of exceptional merit. The first prize was secured by Mr. T. H. Sochon's cow "Tendring Floss 34th", (No. 235\*), which obtained the remarkably high figure of 148-6 points.

<sup>\*</sup> Milked twice daily. † Milked thrice daily.

A reference to Table IV shows that this constitutes a record for the breed, even including the cow milked three times daily. The second prize was won by the Duchess of Newcastle's cow "Hardwick Hester" (No. 227†) with 130-6 points.

Class 16. Red Poll Cow over 3 and under 5 years old.—Entries 7 (4\* + 3†); present 6 (3\* + 3†). With the exception of one cow the animals secured points above the class standard. The first prize was awarded to "Southdown Beltine" (No. 240†) with 122.8 points, the property of Major J. A. Morrison. Mr. W. Hill's "Basildon Hawthorn" (No. 243\*) was second with 104.8 points.

The extra prize of £5 offered by the Red Poll Cattle Society for the cow (Classes 15 and 16) gaining the most points by Inspection, and in the Milking Trials, was divided between three animals with equal awards. These animals were the Duchess of Newcastle's "Hardwick Hester (No. 227†), Lieut.-Col. Sir Merrik R. Burrell's "Knepp Prudence 4th" (No. 239†) and Mr. W. Hill's "Basildon Hawthorn" (No. 243†).

Class 17. Red Poll Heifer.—Entries 16 (6\* + 10†); present 8 (3\* + 5†). This class hardly attained a satisfactory standard, as two animals failed to reach the class standard of 66 points. The first prize was awarded to "Longford Courage" (No. 247†) with 104·2 points, the property of Viscount Folkestone. The second prize was secured by Mr. J. G. Gray's "Basildon Queenliness" (No. 258\*) with 103·1 points. The extra prize of £5 offered by the Red Poll Cattle Society for the heifer gaining the most points by Inspection and in the Milking Trials was awarded to Mr. W. R. Glazebrook's "Lydiate Lass" (No. 254†).

Class 18. Blue Albion Cow.— Entries 8\*; present 5\*. The average for the class was not as high as at the previous Show, but an individual breed record was made by the first prize winner, Mr. B. W. Smith's "Elsenham Jessie" (No. 264\*) with 156.8 points. The second prize went to Mr. J. W. Towler's "Megdale Emma" (No. 267\*) with 116.6 points. All the animals reached the class standard of 100 points.

Class 19. Blue Albion Heifer.—Entries 3\*; present 3\*. The 1926 Show was the first which offered a class for Blue Albion Heifers, and three animals appeared. One failed to reach the class standard of 66 points. The first prize went to Mr. J. W. Towler's "Mount Dairymaid 2nd" (No. 270\*) with 73-3 points, and the second to Mr. A. Gillett's "Ridgewardine" (No. 269\*) with 66-7 points.

Class 20. Welsh Black Cow.—Entries 4  $(1*+3\dagger)$ ; present 2  $(1*+1\dagger)$ . Of the two animals which were exhibited, that milked three times daily failed to reach the class standard of 90 points. The only award was a first prize to Mr. J. B. Jones's "Bryncian Handy 6th" (No. 275\*) with 94-0 points.

<sup>\*</sup> Milked twice daily.

Class 21. Ayrshire Cows.—Entries 22 (2\* + 20†); present 14†. The cows of this breed showed a high degree of merit and every animal secured points in excess of the class standard, and lost no points for poorness of the quality of the milk. The first cow in this class was Mr. J. J. Johnstone's "Millantae Mayflower" (No. 279†) with 174·2 points. The same cow also secured the Rowallan and National Milk Challenge Cups. The second prize was awarded to Mrs. M. Mackay's "Bruchag Pearl 7th" (No. 288†) with 174·0 points.

Class 22. Ayrshire Heifer.—Entries 16 (1\* + 15†); present 12†. The animals of this class also obtained a creditable report as all exceeded the 60 points for the class standard. The first prize went to Mr. M. Cochrane's "Ryemuir Clara" (No. 299†) with 117·6 points, and the second to "Byreholm Eliza" (No. 300†) with 115·5 points, also exhibited by the same owner.

Class 23. Guernsey Cow.—Entries 10 (7\* + 3†); present 6 (4\* + 2†). The average in this class for cows milked twice daily was 91·4 points, which, on reference to Table III, will be seen to be a record for the Dairy Shows. This high average was largely due to the individual record created by cow No. 318\* in obtaining 116·5 points (see Table IV). The points awarded to the animals milked three times daily were even higher, and the first prize and Stagenhoe Cup went to the Misses Hargreaves' "Lemon Gadfly" (No. 314†) with 148·4 points, and the second prize and reserve for the Stagenhoe Cup to Mr. C. Norman's "Hadham Goldstream 11th" (No. 316†) with 123·6 points.

Class 24. Guernsey Cow over 3 and under 5 years old.—Entries 6  $(5*+1\dagger)$ ; present 5  $(4*+1\dagger)$ . The number of entries in this class was smaller than usual, and all but one exceeded the class standard of 71 points. The first prize was awarded to "Hadham Nellie 14th" (No. 326 $\dagger$ ) with 104·2 points, exhibited by Mr. C. Norman, and the second prize to Mr. E. E. Palmer's "Jenny's Princess" (No. 327\*) with 103·8 points.

Class 25. Guernsey Heifer.—Entries 11 (10\* + 1†); present 9\*. The animals in this class did not maintain the standard of the three former shows, and the average number of points only reached 64.8 (see Table III). The first and second prizes were secured respectively by "Hayes Lola 6th" (No. 331\*) with 82.1 points and "Downe Princess Mary 7th" (No. 332\*) with 79.8 points. Both heifers were the property of Sir Eric Hambro.

Class 26. Jersey Cows.—Entries 23 (21\* + 2†); present 13 (12\* + 1†). Several cows in this class secured very high total points with the result that the average (98.6) for the class (see Table III) for cows milked twice daily is the highest for the breed. The first prize cow was Mr. R. W. Carson's "Mastermans Golden Cidonia" (No. 363†) with 126-1 points, and the second, Major A. W. Huntington's "Marriette's Violet" (No. 359) with 119-64 points. It may be noted

that the third prize winner almost tied with the second as the points were 119.55.

Class 27. Jersey Cow over 3 and under 5 years.—Entries 15 (14\* + 1†); present 10 (9\* + 1†). This class again provided an excellent entry and the average number of points gained was almost as high as that of the older cows, namely, 97.7 for cows milked twice daily. This average is well above the class standard of 70 points. The first prize was gained by Mr. H. Cecil Pelley's "Sixty Five" (No. 371\*) with 115.5 points, and the second by Col. L. Gisborne's "Cids Raleigh Spectre" (No. 364\*) with 106.8 points.

Class 28. Jersey Heifer.—Entries 25 (23\*+1†+1) withdrawn); present 12 (11\*+1†). For the second year in succession the general excellence of this class was not maintained and five animals failed to reach the class standard of 60 points. The first prize was awarded to "Countess Pauline" (No. 383†) with 95.5 points, the property of Sir Harold Mackintosh and Mr. A. W. Ruggles Bruse's "Patsy May 3rd" (No. 391\*) was second with 80.1 points.

Class 29. Kerry Cow.—Entries 5 (4\* + 1†); present 3\*. Both the numbers of entries and the animals present at the Show show a large falling off, but a reference to Table III shows that the average of the class was well ahead of any previous records for this breed. This high average was not due to an animal of remarkably outstanding excellence, but to the good all-round qualities of every animal. Thus, although a record average of 112·3 points has been obtained, the individual record is still held by an animal exhibited in 1925. The first prize and Kerry Cup were gained by Brig.-Gen. H. Palmer with "Coquet Gipsy" (No. 404\*) with 120·7 points, and the second and reserve for the Kerry Cup was Captain N. Zambra's "Hattingley Haughty" (No. 406\*) with 111·4 points.

Class 30. Kerry Heifer.—Entries 9 (8\* + 1†); present 4\*. This class also attained a uniform standard of merit, averaging 64.5 points compared with a class standard of 53 points. The first prize winner was "Wadlands Flash Mona" (No. 411\*) with 70.7 points, and the second was "Wadlands Flash Drops" (No. 412\*) with 69.7 points. Both animals were the property of Mr. J. W. Towler.

Class 31. Dexter Cow.—Entries 3  $(2^* + 1^{\dagger})$ ; present 3  $(2^* + 1^{\dagger})$ . The number of entries received in this class was much smaller than usual. The first prize and Nutt Cup were awarded to Mrs. H. P. May's "Barbara" (No. 420†) with 88·7 points. No other animals secured more than 70 points, the class standard, and no other awards were therefore possible.

# CHALLENGE CUPS AND TROPHIES.

# Open to All Breeds.

The British Dairy Farmers' Association's Supreme Individual Championship Challenge Trophy.—This trophy, which is open for individual competition is the blue riband of the Show. It is awarded to the owner of the cow gaining the greatest number of points on Inspection (First prize, 50 points; second prize, 45 points; third prize, 40 points; reserve, 35 points), in the Milking Trials (provided the quality of the milk does not fall below 3 per cent. fat, nor below 8.5 per cent. of non-fatty solids at any milking) and twice the number of points in the Butter Test, taking only one Lactation addition.

The Gold Medal of the Association is presented to each year's winner of this trophy.

The following table gives details of the points awarded, from which it will be seen that the British Friesian cow "Lavenham Scabreeze" (No. 150†), owned by The Strutt & Parker Farms, Ltd., secured the supreme award of the Show. Mr. S. Reading's "Langford Damsel 21st" (No. 134\*), a Lincolnshire Red Cow milked only twice daily. was reserve.

Cow N	Го.	 	134*	150†	208†
Inspection Points Milking Trial Points Butter Test Points	· 		45 0 159 5 116 0	40 '0 195•0 104•0	50 0 165 · 9 101 0
Total			320 5	339 0	316 9
Award	- Application - Training	 	Reserve.	Winner.	

The Bledisloe Challenge Trophy. -- After the supreme individual award, the trophy which created the greatest interest was this trophy. which was awarded to the Breed Society adjudged to have the best exhibit of good all-round dairy cows.

This inter-breed competition is conducted upon lines which may be changed from time to time by the Council of the Association, but at the 1926 Show the conditions were essentially as at the previous Show. The animals to compete on behalf of each breed were the six cows in the senior classes with the highest points in the Milking Trials, provided each animal has been considered typical of its breed by the Inspection Judges, and has attained the breed standard class points in the Milking trials.

The total number of points gained by each team of six cows consists of the sum of the milking trial points of each animal, plus inspection points on the basis of 100 points for first prize, 90 points for second, 80 points for third, and 70 points for fourth place.

Only five breeds provided teams of six animals, and the details are given in the following table:—-

THE BLEDISLOE TROPHY TEAMS AND POINTS GAINED.

Class	i —Pedigro	e Shorthorns			Class 8 Br	itish Priesian	٠.
No. m Catalogue	Milking Trial Points.	Inspection Points.	Total Points.	No. m Catalogue	Milking Trial Points	Inspection Points	Total Points
11* 24* 18* 21 9†	137 · 4 135 · 7 130 · 0 121 · 2 119 · 3 115 · 6	- 90 80	137 4 135 · 7 130 · 0 121 · 2 209 3 195 · 6	150† 160† 151† 149† 162† 154†	195-0 169-2 165-9 160-9 157-1 155-2	80	275 · 0 169 · 2 165 · 9 160 · 9 157 · 1 255 · 2
	759 - 2	170	929 2		1003 3	180	1183 · 3

	Class 15—	-Red Polls		TO IT AMERICAN AND ADMINISTRATION OF THE PERSON OF THE PER	Class 21 -	-Ayıshires.	
235* 227† 228* 236* 233* 237*	148 6 130 · 6 127 · 5 116 · 1 106 · 2 101 · 3	70 90 80 100	218 6 220 · 6 207 · 5 116 · 1 206 · 2 101 · 3	270† 288† 276† 286† 290† 280†	174 · 2 174 · 0 161 · 2 153 · 3 153 · 0 144 · 0	100	274 · 2 174 · 0 161 · 2 153 · 3 233 · 0 144 · 0
Minister Minister or months are not 1	730 · 3	310	1070 · 3	THE RESERVE OF THE PARTY OF	959.7	180	1139 - 7

Class 26 - Jerseys.

~~,			
No. in Catalogue.	Milking Trial Points.	Inspection Points.	Total Points.
363† 359* 357* 362* 350* 358*	126·1 119·6 119·6 107·0 106·8 106·4	70 90  80	126 I 119·6 189·6 197·0 106·8 186·4
*****	685 · 5	240	925 · 5

<sup>\*</sup> Milked twice daily.

<sup>†</sup> Milked thrice daily.

The following is a summary of the points gained in the competition for the Bledisloe Trophy, with the breeds arranged in order of merit:—

Class.	Breed.	Milking Trial Pomts.	Inspection Points.	Total.	Remarks.
8 21 15 1 26	British Friesian Ayrshire Red Poll Pedigree Shorthorn Jersey	 1003·3 959·7 730 3 759·2 685·5	180 180 340 170 240	1183 3 1139·7 1070·3 929·2 925·5	Winner. Reserve.

The British Friesian Cattle Society hold the Trophy for the year, with the Ayrshire Cattle Herd Book Society as Reserve.

The Morrison Challenge Trophy is awarded to the owner of the cow exhibited at three consecutive London Dairy Shows gaining the greatest number of points totalled according to the following scale:—

(a) Number of points in the Milking Trials above the standard for the breed, plus (b) three times the number of points in the Butter Tests above the standard for the breed, and (c) Inspection points, as follows:—First prize, 40 points; second prize, 30 points; third prize, 20 points; fourth or reserve, 10 points.

Three cows competed for this trophy, and the winner for the second year in succession was Mr. A. B. Croxon's Non-Pedigree Shorthorn Cow "Spot" (No. 101†) with a total of 239.95 points. The reserve was a Jersey cow "Roberta's Star 2nd" (No. 346\*) owned by Mr. G. Cross, which obtained 195.1 points as a total for the three years.

The winner's record at the Shows of 1924, 1925 is exceptionally fine, and is given in detail below:—

	No. in	Mi	lkıng Tria	ls.	Ві	itter Tests	s.	Inspe	ction.
Year.	Cata- logue.	Points.	Standard	Net Points.	Points.	Standard	Net Points.	Award.	Points.
1924 1925 1926	67* 77* 101†	142·5 145·9 146·3	110 110 110	32·5 35·9 36·3	40·5 36·0 47·25	34 34 34	19·5 6·0 39·75	2nd 1st	30 40
		T	otals	104.7		d	65 · 25		70
		Gr	AND TOT	AL	239 • 95	points.			

The Barham Challenge Cup is awarded to the owner of the cow gaining the greatest number of points in the Milking Trials. The British Friesian Cow "Lavenham Seabreeze" (No. 150†) was the winner, and was the property of The Strutt & Parker Farms, Ltd. Mr. C. H. Harding's "Hemsted Ellen" (No. 176†) was reserve.

The Spencer Challenge Cup is awarded to the owner of the cow gaining the greatest number of points by Inspection, Milking Trials and Butter Tests. The following are the points allowed for Inspection: first prize, 50 points; second prize, 45 points; third prize, 40 points; reserve or very highly commended, 35 points; highly commended,

<sup>\*</sup> Milked twice daily.

30 points; and commended, 25 points. The Cup was won by the British Friesian Cow (No. 150†). The reserve for the Cup was Mr. W. Hunt's South Devon Cow "Milkmaid 9th" (No. 208†).

The Shirley Challenge Cup awarded to the owner of the cow giving the greatest weight of milk in the Milking Trials, such milk to contain not less than 3 per cent. of fat and 8.5 per cent. of non-fatty solids, was also won by the British Friesian Cow (No. 150†) with the British Friesian Cow (No. 176†) as reserve.

The National Milk Cup, awarded to the owner of the cow or heifer entered in or eligible for the Herd Book of its breed, gaining the greatest number of points per 1,000 lbs. live weight in the Milking Trials, was awarded to Mr. J. J. Johnstone, Millantal, Lockerbie, Dumfriesshire, for his Ayrshire Cow "Millantal Mayflower" (No. 279†) with 140.9 points per 1,000 lbs.

The reserve was Major C. R. Dudgeon, whose Ayrshire Cow "Cargen Holm Proud Lady 8th" (No. 290†) gained 138·7 points per 1,000 lbs. live weight. The latter animal was also placed second at the 1925 Show.

The Robert L. Mond Special Prize of £10, awarded to the owner of the two animals, competing in the Milking Trials, which are the progeny of a registered bull of the same breed, and which gain the largest number of points above their class standard, and are certified as true to type by the Class Inspection Judge. There were 11 entries.

The winner was, for the second year in succession, Mr. J. Cochrane with two Ayrshire Cows, the progeny of the bull "Byreholme Copper King" (20606). The second prize of £5, donated by the Countess de la Warr was won by Major C. R. Dudgeon, also for the second time in succession with two Ayrshire Heifers, the progeny of the bull "Auchenbrain Casino" (22767). The reserve was Mr. J. W. Towler, Wadlands Hall, Farsley, Leeds, with two Kerry Heifers, the progeny of the bull "Wadlands Flashpoint" (621).

The points gained by the leading competitors are given below:

Cata- logue No.	Milking Trial Points.	Class Standard	Balance.		Total.
Progeny of Byreholm Cop	per King (	(20606).	(Ayrshi	re.)	
292† Maqueston Mayflower 293† Byreholm Buntie		90 90	49·7 53·5	}	103-2
Progeny of Auchenbrain	Casino (2	2767).	(Ayrshire	.)	
310† Cargen Holm Letty 7th 311† Cargen Holm White Stockings 11th	91·7 105·3	60	31·7 45·3	}	77.0
Progeny of Wadlands B	llash point	(621).	(Kerry.)		
411*   Wadlands Flash Mona 412*   Wadlands Flash Drops	I .	53·3 53·3	1	}	33.8

<sup>\*</sup> Milked twice daily. † Milked thrice daily.

In view of the intense interest and keen rivalry between the various breeds at the Dairy Show, the following table will supply a survey of the distribution of the cups and trophies. The reserve in each case is also given.

	Breed of Winner.		Breed of Reserve.
Supreme Champion	British Friesian		Lincolnshire Red.
Trophy			
Bledisloe Trophy	 British Friesian		Ayrshire.
Morrison Trophy	 Dairy Shorthorn	(non-	Jersey.
	Pedigree)		-
Barham Cup	 British Friesian		British Friesian.
Spencer Cup	 British Friesian		South Devon.
Shirley Cup	 British Friesian		British Friesian.
National Milk Cup	 $\Lambda$ yrshire		Ayrshire.
R. L. Mond Prize	 Ayrshire		Ayrshire.

The following tables supply much valuable information on the performances of the different breed classes at the 1926 and other recent Shows, and affords opportunities for many interesting comparisons:—

- Table I contains in summarised form the entries, the average live weight, milk yield, fat percentage and points earned and lost in each class, also the average milk yield and points per 1,000 lbs. live weight.
- Table II shows the number of cows and heifers tested, average points gained, number of animals attaining the Association's standard points, and average live weights of each class at the last three Shows.
- Table III shows the average points gained in the Milking Trials each year since 1914.
- Table IV shows the highest points gained in each class each year since 1914
  - Table V shows the average yield and quality of the milk yielded by each class at the 1926 Show.
  - Table VI shows the number of animals yielding milk deficient in fat and solids-other-than-fat in each class of each Show since 1914.

It will be observed that the averages for cows milked twice daily and those milked three times daily are given separately for comparative purposes.

TABLE I.

		Num	Number in Class.	Average	, , , , , , , , , , , , , , , , , , ,	Yield of		Animals	Animals losing Pounts	Average Points	Points	Average B.D F.A.	B.D F.A.
Class.	<b>Д</b> БЕСКІРТІОМ,	Entered.	Present in Milking Trials.		Yield of Milk.	1,000 lbs. Live Weight.	Fat.	for Fat. A.M. or P.M.	for Quality of Milk.	Class for Quality of Milk.	1,000 lbs. Live Weight.		Pounts for Class.
	Cous over 5 years old.		****	lbs.	lbs.	lbs	0,	0	ò°	communication visions		-	
-	Dairy Shorthorn	*0;+	∞ ≎1	1,511	52.2 53.1	34 6 40·0	4.57	00	12.5	1 25	8.06 80.8	113·3 120·3	100
7	" " Non-Pedigree	***	• •	1,316	55.0 62.4	8.41	80 80 80 90 10 10	0 0 0 0 0 0 0 0		20.0	25.00	124 1	110
9	Lincoln Red Shorthorn	* †	21 21	1,404	93.e 60.e	#25.0 10.0		200	 000 000 000 000 000 000 000 000 00	000		133 8	999
∞	British Friesian	***	16	1,306	86.8 7.2.1	51.3		100 0	37.5	10.0 5.6		120 6 149·4	9110
11	South Devon (Herd Book Society)	*.+	01	1,566	20.5	15.5	4.53	0	10	10	7 701	165.9	100
65.4	" Recorded Cattle Society	故 <b>*</b>	0 ==	1,253	49.5	39 5	79·F	10	0	10	1 06	113.2	001 000 000 000
15	<b>4</b>	* *	9	1.231	51:5 61:19	41.5 48.9	3.84	00	00	00	95.2	$\frac{116}{130.6}$	100 100
18	Blue Albion	***		1,389	59 0	4	38.5	0.00	0.00	0.9	# 1. 87.	120.1	100
20	Welsh Black	***		1,124	38.0	35.0	66.†	00	00	00	8 ic 9 ic	0 1 2 8 3 4 4 8 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8	200
21	Ayrshire	*:0:	0 <u>†</u>	1,169	63.1	0.46	- F - F	٥	10	0	122.7	137.1	868
53	Guernsey	* ÷	<b>→</b> 01	1,027	38.9 55.0	37.9 47.3	3.88 5.74	00	00		88 7 123 9	91.4 136 0	88
56	Jersey {	21. 24.	27	906	0.0F	44 1 36 2	4.98 7.46	% % 0	e. 0	 	108.0	98.6 136.1	06 06 06
53	Kerry	*:	e 0	1,056	† IG	1 8 1	11.11	o l	0	o l	107.1	112.3	2 Z
31	Dexter	* +	01 H	243	35.1	47.4	 	0.00	0.00	0 00	86 6 115·1	862.6 88.6 88.6	66
	Carried forward	*66 *84 ********************************	15 44					***	To make a second		-	n as = 100	,
		* Milk	* Milked twice daily.	laily.		# T	† Milked thrice daily.	ce daily.					

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					TADLE	T.	Consessación.				-	-	-	
	\$		Number	Number in Class.	Average	Average	Yield of Milk per		Animals	Animals losing	Average	Points per	Average B.D.F.A Points Standard	B.D.F.A. Standard
Class.	DESCRIPTION,		Entered.	Present in Milking Trials.	Weight of Class.		1,000 lbs. Live Usight.	Average Fat.	Standard for Fat. A.M. or P.M.	Points for Quality of Milk.	lost by Class for Quality of Milk.	I,000 lbs. Live Weight.		Points for Class.
					lbs.	lbs.	lbs.	%	%	%				
	Brought forward	ward {	99*	51				2	?	2				
	Cows over 8 and under 5 years old.	years old.	-					-	*******					
51	Dairy Shorthorn	:	* ±52	11	1,323	42.3	32·0 44·5	3.81	0 25 0	18.2	5.0	67.1 93.5	88.3	80 80 80 80
6	British Friesian	:	*15		1,368	77.3	57.4 48.6	3.45	089	44.4	10.0	122.1	167.1	91 91
16	Red Poll	:	***	00 00	1,210	41.4	34·2 5-2	3.72	88.0	88 3	e 0	75.7	90 1 106 0	30 88 80 88
<b>F</b> 6	Guernsey	:	* +	₩	964	35 5 42.6	36 8	5 43	00	00	00	89.5	85.3 104.2	22
22	Jersey	:	**	6.	864 843	37.1	38.4	6.43		000	.00	112.0	97.7	75
	Hetfers.	,							)	)	)	!		
80	Dairy Shorthorn	:	33*	19	1,102	32.5 87.3	29 5	3 76	26.3	36.8	3.7	0.09	65.7	66
ū	" " Non-Pedigree	digree	1-	, <sub>—</sub>	1,222	22.4	18.4	86 8	30	30	0	47.4	26.3	73
2	Lincoln Red Shorthorn	:	* tc	ಎ ಎ	1,159	38.5 5.8 5.8	32 9 39 7	3.84	00	0 88	0 65	76.0	87.7	99 99
10	British Friesian	:	*91	710	1,394	40.7	29.3	3.53	25 0	25.0	100	20.2	80.9	73
12	South Devon (Herd Book	k Society)	10	00	1,020	-	9	2	12.0	0.67	0	<u>.</u>	0 # R	99
11	Red Pole	:	*9 <sup>1</sup>	CO 1C	1,092	35.2 2.0	22.5	40.8	00	00	00	9.78	27.5	99
19	Blue Albion	:	*	000	1,233	30.0	24.8	4 29	00	. 0	0	55.	8.29	99
22	Ayrshire	بہ۔ :	121	120	1,034	45.5	44.0	4.37	80	8.3	8.0	98.1	101.3	88
25	Guernsey	:	*0T	<b>ه</b>	100	26.8	29 6	4.65	0	1:1	<u>:</u>	71.1	8.79	56 56
58	Jersey	:	# ## T	11	762	26.2 36.6	34 4	5.78	18.2	18.2	8.10	136.1	95.5	88
30	Кепу	ىہ :	* =	#	843	29.3	34.8	₹·00	0	0	. 0	18.8	64.5	50 50 50 50
	TOTAL	:	256* 160†	136*										
-			91F	233										
			* Milk	* Milked twice daily.	laily.		† Mill	† Milked thrice daily.	daily.					

TABLE II,-SHOWING NUMBER OF COWS TESTED, AVERAGE POINTS GAINED AND THE NUMBER OF COWS ATTAINING THE SOCIETY'S STANDARD 1994 TO 1996

	Average Live Weight of Class.	1924 1925 1926	cwt. 1b cwt. 1b cwt. 1b	12 2411	11 91 11 18 11	10 2010 34 9	12 4 - 12	12 55 12 6 12	10 87 10 18 10	9 - 61 001 01	18 512 6012	11 96 11 105 19	11 - 11	<u> </u>	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10 7911	10 5 10 62 10	- 10
	of Cows	1926	%	6 100 100 100	4 100.0	2000	999		20 100 0		15 93.8	88.9		=	110.01	1 100.0		
	and Percentage above Standard.	1925	%					25.2			80.0			0.00	4 66.6		3 75.0	
	Number and Percentage of Cows above Standard.	1924	, o,			, 		33.3	,		100.0		· • .	- I   I	1 88	8.88		
1926.		1926		113.3 7	~ I~	78.1	124.1	26.3		9.68	120.6	129.5	94.6	- 6.29		116.5		0.001
STANDARD-1924 TO 1926	Average Points Gained.	1925		C)	-		Charles was at	73.3				er readings. P. S		114.9	103.6		~	
RD—I	Ave	1924						66.8		-	118.2	<del></del>	85.0	11		92.1	89.6	
TAND!	Cows 1.	1926		* * *	11.	19#										***		
	Number of Cows Tested.	1925						~ .				-		<b>*</b> 7	*0*			
		1924		*	12*	<b>*</b> 9	15*	<b>*</b> 1 <b>*</b>	۱ م	*	200	91	<b>*</b>	11	*	**	191	1
	A, H. H. H. H. H. H. H. H. H. H. H. H. H.	, cilhata masai se		ξ. 100 100 100	~	ر وو وو	٠,٠	. i.	ر 189	کر م	919 	~	333	901	* S		~~	ت
	Description.	To Accompany to the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the C		Dairy Shorthorn—Pedigree	Ditto (over 8 and under 5 years)	Ditto Heifers	Dairy Shorthorn-Non-Pedigree	Ditto Heifers	Lincoln Red Shorthorn	Ditto Heifers	British Friesian	Ditto (over 8 and under 5 years)	Ditto Heifers	South Devon (Herd Book Soc.)	South Devon Heifers (ditto) South Devon (Rec. Cattle Soc.)	Red Poll	er 3 and under 5	,
	Class.			T	63	ဇ၃	#	3	9	4	∞	6	10	11	122	4 5	2 2	1

\* Milked twice daily. † Milked thrice daily.

Table II.—Showing Nimber of Cows Tested, Average Points Gained and the Number of Cows attaining the Society's Spanish and 1098 ... Ording of

		95	e.	84 57 45	E	F , 67	9.	10	88	T.	260	80.00	06	18 8	86	<del>.</del> ,
	Average Live Weight of Class	1926	cwt lb cwt lb cwt. lh	30 9 73 12	11 11 11 11 11 11	01 96	6		000 701	در. د ده	رن دی دی	[~]- -	. 60 e	-1 0 61 0 61 0	84 e	96
	rage ht of	1925	cwt 1	52,10 3 44,12 7	10		9 100	9	8		<sub>∞</sub>	. I	6 107	တ္ထ	9	₩.
	Ave	1924   1925	wt lb	9 52	111	0 90 10	133	18 (	47.	6,2	8 <del>7</del>		1 +1	8 13	1	5 52.
	Management approximately described		,°°		900	7		00	0		00	0.001	100	0.00	0 9	
	ows	1926			100	1 0	9	100		8		20	10.5		25	
	of C			H 10 10	श⊣०	1 =	2	10101				<del></del>		, - to -41	o-	1
	Number and Percentage of Cows above Standard	1925	, b°	80 0	100 0	81 3	100 0	25 0	12		9 99	100 0	50 0	$\begin{array}{c} 100 \\ 100 \\ 0 \end{array}$	9.99	100
	id Per ove S	1		4   4	1:	<u>ت</u> ا	1	71	-	رت (	»	11	) C.	1-00	10	-
d.	nber an	1924	50	9 99		100.0	100	0 07	13	6 88	ا ق	11	9.02	9 99 30-0	11	100.0
tinue	Nu	19		9   7		∞	2	۱ ٦	9	ος :	9	11	# *1	9 r	1	÷1
STANDARD—1924 TO 1926.—Continued	nts	1926		•	94.0 87.5 87.8	137 1	101.3	91.4	89.5	8.50	126.1	93.7	60 5	112.3	62.6 83.6	31
1926	Average Points Gamed	1925		86 0 28.3	04:1	131.7	90 #	11.5	9.92	8.89		25 1	2.89	90	<u>∞</u>	53 S
)24 TO	Avera	1924		71 5 100·3 1	- <del></del> 	134-1 1	93 2	Ŧ.!!	 	- 2.9 <i>1</i>	F. 16	11	80.0	79.6 1 38.6		58 9
n_I	WS	1926	***************************************	* 7.5	* # ±	1 =	124	# ;	* +	*6	1	*6 1+	*!	* *	* +	1
NDAR	Number of Cows Tested.			* *	ا بي ا	16*	15*	 *∞	*6 (	***	41	* 1	 10*	* * *- 60	ئەرۇ	*-
STA	mber	1924   1925		* *		_		 	. ' 			- 1	*	* *	1	
;		192		6   6		∞	10*	<u>,</u> ,	<b>∞</b>	*6	2	] [	£ 5	చేస్తు •		*i
	A.A.C.A. Standard Points,			66 100	288	88	88	855	C.	56	86	13 13	88	28	೯೯	4
	e e			٠٠٠:	'~	<u>ئ</u>	السهب	_	) { (st	٠ : ر	~~	ر آة	سكس	' i i'		' ;
				: :	. :	;	1	÷	5 yea	፥	:	5 year	;	: :	÷	:
	tion.			: :	: :	<i>.</i>	:	;	(over 3 and under 5 years)		÷	ınder	:	. : :	;	:
	Description.			ıfers 	TS.	:	22		3 and	£	;	and 1	13:	: 10	:	2
	ā			Il Her	Heite Black	بو	Heife	ey.	(over	Heifers		over 3	Heifers	Teifer	Ī	Heifers
•				Red Poll Herfers Blue Albion	Ditto Heifers Welsh Black	Ayrshire	Ditto Heifers	Guernsey	Ditto	Ditto	Jersey	Ditto (over 3 and under 5 years)	Ditto	Kerry Kerry Heifers	Dexter	Ditto
	· · · · · · · · · · · · · · · ·		, .	17 118		- 15	 55	- 53 - C	34 I		 	-		. •		1
	Class.			, , ,-	- ci	ÇÌ	<b>c1</b>	ণ	Ċī	ତା	ଦା	61	87	នុះនុ	. 31	35

† Milked thrice daily

\* Milked twice daily.

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	Dexter Cows	61 5 53 6 53 6 53 6 59 0 62 6 62 6	59 2 70 88.7		68 0 66 6 66 6 66 6 70 9 70 9 86 4 88 7	
	Keny Helters.	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	53 5		683 693 707 707 707	
	Kenty Cows.	69 6 72.1 76.5 75.3 75.3 79.6 105.6	84 8		101 3 95.6 107 9 85 0 114.8 103.7 120 7	
1914.	Jersey	89 80 80 80 80 80 80 80 80 80 80 80 80 80	86 4 90 126 1		112 2 100 4 120 1 120 1 100 4 110 9 1119 9 1120 1 120 1 126 1	
INCE	Guernsey Heifer	63 9 6 6 6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	56	1914.	82.4 73.8 83.7 78.8 102.7 92.5 86.9 86.9	
YEAR, SINCE	Guernscy Cows.	88.55 84.58 84.58 84.58 84.53 17.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77 19.77	84·2 85 136 0	SINCE	99 7 118 8 118 8 124 1 124 1 107 7 106 5 118 4	1
	oridaryA Preferen	7.8.5 90 4 90 4	8.7 ± 60 101 3	YEAR S	95 5 111 8 107 3 115 3 115 3	
S EACH	Ayrshire Cows	106 7 95.7 128.7 121 7	117 3 90 137 1	ł	116 8 120 0 150 3 158 3 165 2	2.
TRIALS	noidla shlft Swo	78.3 100.3 128.3 120.1	106.8	EACH	87.7 121.7 145.2 156.8	Milked thrice daily
	Red Poll Herlers.	28.113.66.00 2.00.00.113.86.00 2.00.00.113.64.00	72 3 66 93.5	GAINED	98.1 82.1 96.2 92.2 81.2 80.3 94.6 94.6 107.4 103.1	ked thr
MILKING	Red Poll Cows.	88 88 89 0 83 0 81 83 0 83 0 83 0 83 0 83 0 83 0	102 2 100 130·6	1	144 9 107 0 135 9 119 0 117 3 1122 6 1142 7 1148 6 1148 6 1148 6	+ 3/8
THE	Devon Cows.	85 6 108 5 107 8 99 7 99 7 93 6 103 2 113 2	101 3	Points	1111.3 127.9 126.2 125.3 125.3 1185.5 118.2	
D IN	South Devon	108.5 76 0 104.4 100.5 1114.9	103 2 100 165·9	HIGHEST	133.8 99.2 99.2 143.6 142.4 139.2 145.7	Į,
POINTS GAINED	British Priesian Heifers.	1.07.0 6.7.0 7.0.0 8.8.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0.0 8.0 8	78.1 73 94.6	1	88.9 1.01 1.01 1.09 1.09 1.09 1.09 1.72 1.09	Milked twice daily
YTS (	Rritish Priesian Cows.	80 7 92 3 83 1 1133 6 1135 0 1138 2 1128 8	110·6 110 149·4	THE	103 6 116 3 117 1 117 1 1	ilked tv
Por	1,incolnshire Red Shorthorn Resistant	888.0 7.7.0 888.0 7.7.0 888.0 88.0 7.7.0 87.7.0	9.68	SHOWING	8.50.2 100.2 100.2 100.3 100.0 100.0 100.0 100.0	W *
AVERAGE	Lincolnshire Red Shorthorn	96.3 94.9 98.4 85.6 105.3 1113.2 1114.7 1115.4 1115.4 1115.4	103 · 8 100 123 · 8	)HS	105 5 111 2 113 3 6 115 1 115 1 150 6 118 0 119 9 119 5 119 5	
—A <sup>V</sup> 1	- tronk grind Ded-noN errod Arielts.		17 85	E IV.		
H	Dairy Shorthorns, Won-Pedigice,	106 9 118 5 9 111 8 111 11 11 11 11 11 11 11 11 11 11	109 0 110 110	TABLE	136 9 117.8 117.8 115.9 1159.8 115.9 1147.3	
TABLE	Dairy Shorthorns, Ped, Heilers,	60.0 60.0 60.0 60.0 60.0 60.0 60.0 60.0	64.9		98 1000 1000 1000 1000 1000 1000 1000 10	:
<u> </u>	Onity Shorthorns,	200.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	89.6	-	97.1 101.7 130.6 116.1 121.9 123.4 133.4 146.3	
	Dany Shorthorns, Pedigree.	108 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 5 2 9 9 5 2 9 9 5 9 9 9 9	106·0 100 120 3,	_	144 1255 8 1136 4 1151 9 1152 19 1132 9 1132 9 123 14 121 121 121	-
,	Year.	1914 1915 1919 1920 1921 1923 1923 1924 1925	Average Points of last 10 Showst 10 Showst 20 E.D.F.A. Class Standard 1926‡		1914 1915 1919 1920 1921 1923 1924 1924 1924 1926 1926	,

Table V.—Quantity and Quality of Milk. 1926 Show.

			LABLE	>	.—«O	QUANTITY	X AND	- 1	COALITY	10 To	MILLER.	1050	000					
					.sre	¥	717		1			Αī	rerage C	omposi	Average Composition of Milk.	Milk.		
Class	-	BREED.			o, of oetito	Aver	Average weight of Milk,	ıığır.	Total Weight		Fat.		Solids	Solids—not Fat.	at.	Tc	Total Solids.	is.
No.					Comi	Morn.	Aff.	Even.	Milk.	Morn.	Aft.	Even.	Morn	Aft.	Even.	Моги.	Aft.	Even
1	Dairy Shor	Dairy Shorthorn—Pedigree			8* 12	1bs. 26.2 17.3	1bs. 26 0 18·0	lbs.	1bs. 52·2 53·1	3.77 3.85	4.48 5.42	4.45	8.83 9.11	8.97 8.72 8.72	8.93	% 12.61 12.96	9, 13,45 14.14	13.38
61	Ditto	(over 8 and under	l under 5	5 years) {	11. 4†	21.4 19.8	20.9 19.2	18.3	42.3	3.74	3.87	3.94	8.95 9.05	90.6	9.03	12.90 12.59	$\frac{12.95}{13.80}$	12.97
60	Ditto	Heifers	:	ى <sub>چ</sub> ى :	19* 6†	16.4 12.3	16.1	12.3	32.5 37.3	3.75	3.79	3.72	9.02	9.18	9.29	12.74 12.60	12.97 $13.41$	13.01
<b>4</b> 1	Dairy Shor	Dairy Shorthorn—Non Pedigree		<i>-</i>	* # #	27.7	27 · 3 20 · 9	20.3	55·0 62 4	3.84	8.72	3 59	8.76	8.97	86.8	11 74 12·46	12.69 13.32	12.57
ra	Ditto	Heifers	:	:	*	10.9	11.5	I	22.4	3.95	4 01		9.58	69.6		13.48	13.60	İ
9	Lincoln Re	Lincoln Red Shorthorn	:	رچي ::	\$1 to	27.5 20 3	26·1 20·8	19.5	53.6 60.6	4·12 3·21	4.51	3.64	8.79	9.10	9.03	12.91 11.87	13.61 $13.53$	19.67
~	Ditto	1	Heifers .	َ <i>نہ</i> :	***	19.5	18.7	14.2	38·2 43·8	4.74	4.53	3.86	9·10 8 99	98 6	8.88	13.84 12.61	13.89 '	12.74
œ	British Friesian	sían	:	ت :	1* 16†	33.6 24.2	33.2 24.4	24.1	66 8 72.7	3.81	3.90	3.59	8.74 8.76	8.88	8 78	11.64	11.98 12.78	12.37
6	Ditto	(over 3 and under 5 years)	l under 5	years) {	#±6	36.7	40·6 22·5	22.5	67.3	3.76	3 31	3 75	8 88 8 64	8 99	8 60	12.64	13.26 11.98	12.35
10	Ditto	Heifers	:	۔ :	*#±	20.4	20·3	16.1	40 7 47.6	3.57 8 59	3 49 3 62	3.88	8 69 9 01	8.98	1 8 8 8	12.26 12.60	12.47 12.52	12.76
11	South Devo	South Devon (Herd Book Society)	k Society)	:	+	25.1	22 4	23.0	20 5	4.93	4.95	10	9.35	28.6	98.6	14.28	14.32	13 08
14	Devon	:	:	:	*	24.4	25.1	1	49.5	4 15	5.12		8.99	90 6	1	13.14	14.18	[
15	Red Poli	:	:	<u>ښ</u> ::	*#	20.8	25.4	20.0	51.3	4.28	4 49 3.86	3.64	9.23	9.14	9.04	13.32	13.63 $13.02$	12.68
16	Ditto	(over 3 and	8 and under 5 years)	years){	* *	20.4	21.0 13.6	15.6	41 4	3.77	4 10 3.71	3.67	9.20	9.19	9.14	18·61 13·27	13.29 12.94	12.81
				*	Milked	Milked twice daily.	aily.		1	† Milked thrice daily.	hrice d	anly.						

Table V.-Quantity and Quality of Milk. 1926 Show-Continued.

							'sıc	A vers	oo Wei		- Interior			Αĭ	Average Composition of Milk,	omposi	tion of	Milk.		
Class		H.	BREED,			jo oj	niiio(	0	of Milk,		Weight		Fat.		Solic	Solids—not Fat.	Fat.	To	Total Solids.	8
						N.	Com	Моги.	Aft. ]	Even.	Milk.	Morn.	Aft.	Even.	Morn.	Aft	Even.	Morn.	Aff.	Even.
17	Red Poll Heifers	Heifers	:	:	:	ا تها	*8*	lbs. 17·8 14·4	15.4 17.4 14.5	15. 14.1	1bs. 35 2 43·0	3.89 3.65	3.90	3.87	9.17 9.20	9.36	%-66·8	$^{\circ'}_{13.06}_{12.85}$	13.55 13.55	% 12.86
18	Blue Albion	ion	÷	:	÷		5*	29.5	29.8	1	29.0	3.68	3.96	ı	29.8	8.83	1	12.35	12.79	1
10	Difto	Heifers	:	÷	:	;	*8	15.2	15.4		30.6	4.06	4.52	1	9.17	80.6	1	13.23	13 60	1
8	Welsh Black	ack	፥	:	:	بہ	*+	22.6 12.8	21.8 12.6	12 6	44·4 38·0	3.46	3 92	4.22	9.46	07 6 0 40	9.34	$\frac{12}{14} \frac{92}{00}$	$\frac{13\cdot34}{13\cdot80}$	13 56
21	Ayrshire	:	÷	÷	;	- :	144	21.3	$21 \cdot 2$	20.6	63.1	3.95	4.67	4.65	9.17	9.17	9.04	13.12	13.84	$13 \cdot 69$
55	Difto	Heifers	:	;	፥		12†	15.0	15.4	15.1	45.5	3.73	4.55	4 84	9.26	9.34	9.25	12.99	13.89	14.09
53	Guernsey	:	፥	:	;	٠	* + 7	19.7	$\frac{19.2}{17.1}$	17.9	38.9 52 0	3.66	5.50	6.72	8.98	9 25 9 50	9.59	12.64 14 34	13.34	16.31
24	Ditto	(over 3	and 1	(over 3 and under 5 years)	years)	'ښ	1+	17.8	17.7	14.6	35.5 42.6	4.66	5.58	5.59	8.99	9 52 9 00	9.11	$\frac{13}{14 \cdot 14}$	14.05 14.56	14.70
25	Ditto	Heifers	:	:	;	:	*6	13.2	13.6		26.8	4.40	4.90	1	9 15	9 33		13.55	14.23	1
56	Jersey	÷	፥	:	i		17*	19.7	20·3	13.3	40·0 40·4	4.90	5.05	9.05	9.15	9 12	99.01	$\frac{14.05}{17.04}$	14·17 16 40	19.60
27	Ditto	(over 3	क्षाते १	(over 8 and under 5 years)	years)	7	94	18.2	18.9	10.3	37·1 32·3	5.75	5.27	2.08	9.24	9.20	9.26	$\frac{14.13}{14.82}$	14 47 15 62	16 34
82	Difto	Heifers	:	:	;	تہ	*#	11.9	14.3	11.9	26.2 36.6	4.46	4.76	6 07	9.55	9.33	8.67	13.62 $13.32$	14.09 15.88	14.74
59	Kerry	, :	÷	:	:		# 60	25.9	25.5		51.4	3.80	4.42	-	60.6	9.56		12.89	13.68	I
 08	Diffo	Heifers	:	:	:	- 1	4*	14.2	15.1		29.3	3.95	4.22	1	9.25	9.21	1	13.20	13 43	!
18	Dexter	÷	÷	÷	i	تټ	### 11.	17.6	17.0 12.1	11.2	34.6	3.39	3.71	3 96	8 93 8 66	9.31	8.66	12.32 $12.40$	$\frac{13.02}{13.54}$	12.62
	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon					# WE	ilked t	Milked twice daily.	ully.		+	† Milked thrice daily.	thrice d	aıly.						

Table VI.—Number of Anmals Yielding Milk Deficient in Fat and Other Solids.

	20 Hanatooriakato   00000000000000000000000000000000000	53	100	
	1923	17	955	
Less than 8 5 per cent. of other Solids	1924 0   11100000000000000000000000000000000	17	239	
other	1923 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ដ	219	
ent. of	1922	15	253	
5 per c	1921 1900 1900 1900 1900 1900 1900 1900	18	220	
lan 8	1830	133	183	
ess th	191   19   19   19   19   19   19   19	1-	145	
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	85	
	1926   1914   1915   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   1919   19	G1	105	١.,
	000000000000000000000000000000000000000	38	233	
	193	2.5	976	
نبا	193 - 1110   000000   000000   0000000000000	36	239	
of Fa	1923 0   1   0   0   0   0   0   0   0   0	21	219	
Less than 3 per cent, of Fat.	86 80 80 80 80 80 80 80 80 80 80 80 80 80	99	253	
m 3 pc	195 196 196 196 196 196 196 196 196 196 196	18	950	
ess the	1930	34	153	
Ť	0   1   0   0   0   1     0   0   0   1   1	133	145	
	1914 1915 1919 1920 1920 1921 1915 1919 1920 1921 1915 1919 1920 1921 1919 1920 1921 1919 1920 1921 1919 1919	99	50	
	Language and a so a so a so a so	81	105	
	rears)  years)  years)  years)  years)  years)  years)	:	sted	-
, g	gree  Pedigree rs  There rs  Hericus  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  There societ  T	÷	als Te	
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Breed and Class	(over 3 and under 5 years) Heifers  thorn—Redigree  d Shorthorn Heifers  sian (over 3 and under 5 years) Heifers  n	al	Number of Animals Tested	
Ř	Dairy Shorthorn—Pedigree  Ditto (lover 3 and under 5 yes Ditto Heifers Ditto Heifers Lincoln Red Shorthorn—Non-Pedigree Lincoln Red Shorthorn Heifers British Friesian Ditto Over 3 and under 5 yes Ditto (lover 3 and under 5 yes Ditto (lover 3 and under 5 yes Ditto (lover 3 and under 5 yes) Ditto (lover 3 and under 5 yes) Ditto Heifers Ditto (lover 3 and under 5 yes) Ditto Heifers Nesh Black Ayshire Ditto Heifers Ayshire Ditto Heifers Ayshire Ditto Heifers Guernsey Ditto (lover 3 and under 5 yes Ditto Heifers Ditto Heifers Lersey Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers Ditto Heifers	Total	Nu	-
	Dairy Shorthorn—  Ditto (over 8  Dairy Shorthorn—  Jimobile Heifers  Dairy Shorthorn—  Jimobile Fireian  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 8  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto (over 9  Ditto			

CLASS 1.—DAIRY SHORTHORN COWS (EXTERED IX OR ELIGIBLE FOR COATES'S HERD BOOK, OR ITS PEDIGREE CLASS 1.

SENT FOR SICH ENTRY	PR	EXTRY PREVIOUS TO THE SHOW.	TO TE	IE SHO		Born on or previous to 1st	R PREV	OL ŠDOI.	IST A	AUGUST, 1921)	(021).		Andreas Vision Plants and Print
1:	1 1	Watercrook Hilda 2nd.	ook id.	Thum	7 Thurnham Barrington 4th.	ington	Comt	9 Combebank Johnby.	ohnby.	1 Pearl	10 Pearl 11th.	11 Histon W Queen	11 Histon Wild Queen
Born in lbs	17	Mar. 20, 1919 1,504 Sept. 28.	919.	Ď	Dec. 15, 1920. 1,352 Sept. 16,	30.	7	May 9, 1917. 1,299 Sept 16. 32	<u>.</u>	Mar. 22, 19 1,444 Sept. 4.	Mar. 22, 1919. 1,444 Sept. 4.	Sept. : Sept	Sept. 2, 1917. 1,458 Sept. 29.
Weight of Milk, 1st day	កតន	Morn. E	Even. 23.7	Мот. 11.2 19.5	Aft. 21.4 13.6	Even. 14.9 19.2	Мот. 20·1 18·2	Aft. 19·4 17·6	Even. 18-2 19-1	Morn. 28.9 26.3	Even. 28 3 26 6	Morn. 31 · 4 30 · 3	Even. 31 3 30·6
Total	<del> </del>	7 6-14	6.97	30.7	35.0	34 1	38 3	37 0	37.3	55.2	54.9	61.7	619
Average	el	99.1	23.45	15.35	17.5	17 05	19.15	18.5	18 65	27 6	27 45	30.85	30.95
Percentage FFat Composition of \$ Solids other than Fat the Milk, \$ Total Solids	. : : :	3.41 8.95 12.36	4.69 9.07 3.76	9 26 13 78	6.64 15.36	8.98 13.80	8:97 12:14	8.71 15.92	8.88 12.96	3.72 9.10 12.82	15 8 61 51 51 51 51 51 51 51 51 51 51 51 51 51	3.90 9.12 13.02	138.64 138.64 138.64 138.64
:	٠   ;	(	1.10	69.0	1.16	0.85	19.0	87.0	92.0	1.020.	19.6	24.0	9.66
Calculation of Points multiply by 20	#    -	15-10 2	55·0	13.80	133.5	16 4	7.21	9.61	2 e1	66.02	٦	0.47	0.6-
Actual weight of Solids other than Fat, in Ibs		1.98	2 13	1.43	1.53	1.53	1.73	1.62	1.65	2.5116	2.3744	15 81	2 68
tion of Points multiply by 4		7.92	8.52	5.68	6.12	6.13	6_88	6.48	09:9	10 05	9.50	11 24	10.72
Points— For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	<b>∦</b> ::	45·55 87·1 16·44	, ,		49·90 53·4 17·92		4	56.30 43.0 20.00		55 40 19	55 05 40 13 19 55	2003	61.8 53.6 21.96
Total Points for Milk Deductions	1 : :	99.1			121.2	4		119.3	1	1114	114 73	137	137.4
TOTAL POINTS GAINED FOR MILK	M	99.1	-		191.2			119.3		114	114.73	137.4	<del>-</del>
Points for time since Calving	1				1			I		0	6.0	1	
TOTAL POINTS GAINED	١ :	.99			121.2			119.3	,	115	115.63	187	Ŧ
Remarks and Awards	1				Reserve.		High	Highly Commended	ended	Highly Commended.	hly ended.	1st Prize; Reserve Desborough Cup Equal, Shorthorn Society's Prize.	lst Prize; Reserve, Desborough Cup; Equal, Shorthorn Society's Prize.

—Continued.
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-DAIRY SHORTHORN COWS
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CLASS

	rood una.	1920. 0 30.	Even. 29 5 31·7	61.2	30.6	5.66 9.44 15 10 1.73	34.6	2.88	11.52	59-55 53-60 21-6	φ ,	80	6.0	1	rize.
nennen.	24 Backwood Seraphina.	June 5, 1920. 1,330 Aug. 30. 49	Morn. 28 4 29·5	67.9	28.95	3 28 8·68 11.96 0.95	19.0	2.52	10.08	59 53 21	134.8	134.8	0	135.7	2nd Prize.
21)—00	19 Plas Power Fairy.	Oct. 4, 1920. 1,680 Aug. 25. 54	Even. 17 0 18·4	35.4	17.71	5.70 8 80 14.50 1.015	20.30	1 57	6.28	34.9 31.5 11.96	78·4 10·0	68.4	1.4	8.69	
TO IST AUGUST, 1921)-Continued.	Plas Fa	Oct. 4 1,6 Au	Morn. 17.6 16.8	34.4	17.2	3.27 8.29 11 56 0.56	11.2	1.42	5.68	8 60 7	E 3	9		9	-
IST AUG	18 Louie 7th.	April 20, 1919. 1,553 Sept. 6.	Even. 31 · 3 31 · 3	62.6	31.3	3.31 9.25 12.56 1.035	20 · 70	2.90	11.60	64·3 42·3 23·2	129.8	8 6	0.2	130 · 0	3rd Prize,
US TO	1 Louie	April 2 1,5 Sep	Morn. 33·3 32·7	0.99	33 0	3.27 8.79 12.06 1.08	21.6	2 90	11.60	64 93 93	129	129		130	3rd 1
OR PREVIOUS	17 Rosette Prim 4th.	Feb. 17, 1919. 1,561 Sept. 17.	Even. 26·0 25·4	51.4	25.7	4.31 8.95 13.26 8 1.1077	22.15	2.30	9.20	51.25 46.17 18.17	115 69	59		115.59	Highly Commended.
	Rosett 4t	Feb. 17, 1 1,561 Sept. 1 31	Morn. 24·9 26·2	51.1	25.55	4 70 8.78 13.48 1.2008	24 02	2.243	8.97	51 46 18	115	115		115	Highly
CLASS I DAIRI SHUKIHUKIN CUWS (BORN ON	12 Longhills Belle 2nd.	Jan. 13, 1920. 1,554 July 25. 85	Even. 21 · 0 20 · 8	41.8	20.9	3.80 8.98 12.78 0.795	15 90	1.88	7.52	44.85 38.1 16.08	0.66	0.66	4.5	·ũ	Highly Commended; Equal, Shorthorn Society's Prize.
S C S	Long Belle		Morn. 23·8 24·1	47.9	23.95	4.64 8.96 13.60 1.11	22.2	2.14	8.56	38	66	66	7	103.5	Highly Commended; Equal, Shorthor Society's Prize.
3	::	::::	: :	:	:	-17:11	:	-:-	:	-: : <del>-</del>	- : i	MILK	•	:	• :
	: .	: : : :	: :	:	:	::::	÷	in 13	:	(B: ::	::	FOR	ving	ED	: 1
DIIG	::	1111	::	:	:	Fat Solids other than Fat Total Solids Fat, in lbs	oy 20	han Fat,	y 4	For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (	Milk	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL POINTS GAINED	:
I EX	::	::::	: :	Total	Average	ther tolids	iply 1	ther ti	iply t	.) × 20) her th	Total Points for Milk Deductions	INTS	time	CNIO	:
	::	::::	day	Ţ	Av	at olids o otal So t, in 1	mm!	lids o	s mul	k (Ibs. (Ibs. ids of	Total Points Deductions	ar Po	ts for	AL, F	w
SS I	: :	. Ibs.  ving	s, 1st s, 2nd			f Soli Tot of Fat,	Point	og jo	Points	of Mil f Fat if Soli	Tota Dedi	Tor	Poin	TOT	ward
CLAS		ght, ir. red . se Cal	f Milk f Milk			tage ion o ilk. eight	Jo uc	eight	Jo uc	ight o					and A
	Number Name	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat . Composition of Solids oth the Milk. Total Solid Actual weight of Fat, in lbs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by	For We For we					Remarks and Awards
		,													

CLASS 2.—DAIRY SHORTHORN COWS (ENTERED IN OR ELIGIBLE FOR COATES' HERD BOOK, OR ITS PEDIGEES SENT FOR SUCH ENTRY PREVIOUS TO THE SHOW. BORN AFTER IST AUGUST, 1921, AND PREVIOUS TO IST AUGUST, 1923).

Number	-::-	25 Kingsthorpe Countess Ruby 4th		26 Penwortham Rosemary.	Da	27 Longhills Darlington 3rd.	s 3rd.	Lo	28 Longhills Briar.	iar,	Dug	36 Odell Duchess.
Born	.	Oct. 9, 1922. 1,356 May 24. 147		Oct. 4, 1921. 1,228 Sept. 17.	, in	Jan. 30, 1923. 1,193 Sept. 23. 25		SS.	Sept. 26, 1922. 1,246 Sept. 31. 27	99.	0ct. 1 1,6 0c	Oct. 13, 1922. 1,383 Oct. 4. 14
day	HER	Morn. Even. 14·2 12·0 11·8 12·4	Morn. 19 6 20 4	Even. 19·8 19·6	Morn. 18 3 16·1	Aft. 16·1 16·5	Even. 15.0 16.5	Morn. 16·1 16·8	Aft 15·4 17·7	Even. 15 9 16 4	Morn. 24·9 23 8	Even. 24·1 23·8
Total	18	26.0 24.4	40.0	39.4	84.4	32.6	31.5	32.9	33.1	32.3	48.7	47.9
Average	17	13.0 12.2	20.0	19.7	17.2	16.3	15.75	16.45	16 55	16 15	24.35	23.95
Percentage (Fat Composition of Solids other than Fat Actual weight of Fat, in Ibs		3.88 5.19 8.14 7.99 12.02 13.18 0.505 0.635	3.28 9.08 12.36 0.66	3.82 9.30 13.12 0.75	4·15 9·67 13·82 0·71	5.01 9.77 14.78 0.82	4 98 9.42 14.40 0.79	3.95 9.33 13.28 0.65	4.79 9.17 13.96 0.79	4.06 9.20 13.26 0.66	3.63 8.97 12.60 0.81	3.73 8.73 12.46 0.895
ly by 20	10 · 10	0.10 12.70	13.2	15.0	14.20	16.40	15.8	13.00	15.80	13.2	16.2	17.9
at, in lbs.	J _	1.06 0.975	5 1.82	1.83	1.66	1.59	1.48	1.54	1.52	1.49	2 17	2.10
	1	4.24 3.900	0 7.28	7.32	6.64	6.36	5.92	6.16	80.9	5.96	8 68	8.4
Points—For Weight of Milk (lbs.) For Weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	L	25.2 22.8 8.14		39.7 28.2 14.6	Andrews personal religion	49.25 46.4 18 92			49·15 42 0 18·20		348	48.3 34.1 17.08
Total Points for Milk Deductions	  -  -  -  -  -  -  -  -  -  -  -  -  -	56·1 20·0		82.5		114.6			109 4		66	99.5
TOTAL POINTS GAINED FOR MILK	1	36.1		82.5		114.6			109 4		66	99.5
Points for time since Calving	۱	10.7				1					1	
TOTAL POINTS GAINED	Ļ	8 97	ļ	82.5		114.6			109.4		36	99.5
Remarks and Awards	L				No companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion de la companion d	3rd Prize.			Reserve.		Hig	Highly Commended.

CLASS 2DAIRY SHORTHORN COWS (Born after 1st August, 1921, and previous to 1st August, 1923)-Continued.	VS (B	ORN AFTE	s 1sr Au	GUST, 1	921, AN	D PREVI	OLS TO	lsr Au	aust, 19	)23)—C	ontinue
Number	::	37 Histon Lady Blanche.	Kiri	38 Aldenham Kirklevington 2nd	n gad.	Alde	39 Aldenham Woodnut.	Barru	43 Lucy.	And Beneda	46 Ancliffe Benedicta 6th
Born	\[\int_{\int_{i}}\]	Oct. 5, 1922. 1,326 Sept. 25 23		July 4, 1922. 1,389 Aug 11. 68	55	Nov. 1, Aug	Nov. 5, 1922. 1,876 Aug. 29.	April 4, 1923 1,158 Aug. 19. 60	. 1923 .58 . 19.	Sept. 1	Sept. 15, 1922. 1,248 Sept. 25.
Weight of Muk, 1st day Weight of Muk, 2nd day		Morn, Even 18.9 18 2 21.0 19 5	Morn. 22 4 21 · 4	Aft 22 0 21 · 6	Even 18 9 19 5	Morn. 21 8 22 3	Even. 21 · 9 20 · 1	Morn 19 9 20 7	Even. 18 0	Morn. 23.8 23.8	Even. 22.3
Total	. 39	39.9 37.7	43.8	13 6	₹-8€	24.1	42.0	9.07	36.3	17.1	16.4
Average	19	19.95 18 85	21 9	21 8	19 2	22 05	21 0	20.3	18 15	23 55	23.9
Percentage Fat Composition of Solids other than Fat the Milk. Total Solids Actual weight of Fat, in lbs		3.24 3 11 8.94 8.93 12.18 12.04 0.645 0.59	2.60 8.58 11.18 0.57	# 21 8 71 12 92 0 92	2 89 8 77 11 66 0 555	3.09 8 93 0 68	3.19 9.11 12.30 0.67	3 90 9.14 13.04 0 79	3 57 9 43 13 00 0 65	4 93 9.27 14 20 1 16	4 01 9 25 13·26 0 93
Calculation of Points multiply by 20	12.9	.9 11.8	11.40	18.40	11.11	13 6	13.4	15 8	13.0	23.2	18 6
Actual weight of Solids other than Fat, ın lhs.		<u>7</u> 8 1⋅68	1.88	1 90	1.68	1 96	1.91	1 86	1.71	2 18	5 1 <del>1</del>
Calculation of Points multiply by 4	1-1   	7.12 6.72	7.52	09 1	6 72	18 1	1.0¥	7.44	£8.9	8 72	8.56
eight of Milk (lbs.) eight of Fat (lbs. $\times$ 20) sight of Solids other than Fat (lbs. $\times$	::4	38.8 24.7 13.84	,	62 9 40.9 21.8	·	<del>ने</del> लान	43 05 27.0 15.48	388	38 45 28.8 14 28	341	46-75 41-8 17-28
Total Points for Milk Deductions	: :	6.11		125.6		· .	85.5	18.	10	105	5.8
TOTAL POINTS GAINED FOR MILK.	ILK	77.3	_	105 6		x.	85 5	81	81.5	105	8
Points for time since Calving	'  	1.		8 7		1	0 1	61	9.0		
TOTAL POINTS GAINED	:	6:22		108 4		Ø	86 5	88	83.5	100	105.8
Remarks and Awards	:		High	Highly Commended.	ended.	Comm	Hıghly Commended	Commo Equal, S Society	Highly Commended: Equal, Shorthorn Society's Prize.	Comm	Highly Commended,

Number Name	::	Greattew Blossom,	) ttew som.	5 Grea Swa	51 Greattew Swanee.	Grea Dar	52 Greattew Darling.	Lavi	53 Lavington Eclipse.	<u>.</u>	54 Grand Duchess Oxford 30th.	iess th.
Born		Dec. 30, 1921 1,394 Sept. 22.	94 94 22.	Feb. 5 1,4 Sept	Feb. 5, 1922. 1,482 Sept. 18. 30	Nov. 1	Nov. 7, 1921. 1,298 Sept. 9. 39	Oct. 1	Oct. 16, 1921. 1,311 Oct. 4.		July 10, 19 <u>52</u> 1,315 Sept. 21,	ei ei
Weight of Milk, 1st day Weight of Milk, 2nd day	::	Morn. 29.2 , 30.3	Even. 33·3 30·4	Morn. 23·6 23 ·8	Even. 22.7 19.9	Morn. 20·0 16 9	Even. 19·9 19·1	Morn 20 8 20 0	Even. 20·7	Morn 24·3 23·1	Aff 13 13 2 0 2	Even. 22 0 22 1
Total	:	. 59.5	63 7	47.4	42.6	36 9	39.0	8·0f	41.1	47.4	44.2	44.1
Average	:	29.75	31.85	23.70	21.3	18.45	19.5	20.4	20 55	23 7	99.1	22.05
Percentage Fat Composition of Solids other than Fat He Mills. Total Solids Actual weight of Fat, in Ibs	1:::	3.91 9.07 12.98 1.16	4·17 9·03 13 20 1·33	4 24 8 96 13 20 1 0	3·18 9·23 12·40 0·68	3.05 8.37 11.42 0.56	4 09 9·15 13 24 0·80	4 02 9 62 13 64 0 82	4.55 9.75 14.30 0.935	3 45 8 63 12 05 0 82	4 94 8·60 13 54 1 09	88.33 12.36 0.84
Calculation of Points multiply by 20	:	23 2	26.6	20 0	13 6	11 2	16.0	16·40	18.70	16.40	21 80	16 8
Actual weight of Solids other than Fat, in Ibs.	n lbs	2.70	2 88	2.13	1 96	1 54	1.78	1.96	7 00	2 05	1.90	1.92
Calculation of Points multiply by 4	:	8.01	11.52	8+.8	7.84	6 16	7.12	1.84	8.00	8.20	7 60	2 68
sight of Milk (lbs.) eight of Fat (lbs. $\times$ 20) eight of Solids other than Fat	(lbs. × ±)	13 7 61	61.6 19.8 22.32	45 33 16	45.0 33.6 16.32	13	37.95 27.2 13.28	1 3 F	40 · 95 35 · 1 15 84		67 85 55.0 23 48	
Total Points for Milk Deductions		133.7	12	f6	6.46	87.01	78.4	16	91.9		146 3	
TOTAL POINTS GAINED FOR MILK	ғок Миж	133.7	1-	76	6.46	89	₹-89	16	6		146.3	
Points for time since Calving	ving											
TOTAL, POINTS GAINED	ED	133.7	.7	F6	94.9	89	4	91	6.16		146.3	
Remarks and Awards		2nd Prize; Equal, Shorthorn	rize; torthorn	Hig	Highly			H	Highly	1st	1st Frize, and	pur

CLASS 3.—DAIRY SHORTHORN HEIFERS (ENTERED IN OR ELIGIBLE FOR COATES' HERD BOOK. RADIN ON OR APPER 18TH AUGUST.

	,	ı	1	1	1	1	15	ı	1	1	1	11	ı	1	
	65 Thornby Pretty Maid.	Sept. 29, 1923. 982 Sept. 24. 24	Even. 15·5 15·2	30 7	15.35	4 48 9.36 13.84 0 69	13.8	1.44	5.76	31.05 27.8 11.48	70.3	70.3		70.3	Highly Commended.
	Th	Sept.	Morn. 15·8 15·6	31.4	15.7	4.48 9.14 13.62 0.70	14.0	1.43	5.72	8611	7	7		-	Conn
	64 Thornby Ringlet 8th.	Sept. 22, 1923. 1,056 Sept. 15. 38	Even. 21 · 4 20 · 9	42.3	21 · 15	3.88 8.64 12.52 0.82	16.4	1.83	7.32	42.55 29.4 14.44	86.4 10.0	76.4		3.4	Highly Commended,
	Tho	Sept. 2	Morn. 21.3 21.5	42.8	21.4	3.01 8 29 11.30 0.65	13 0	1.78	7 12	4 V.	8 71	7		92	Comm
	63 Thornby Jessica 2nd.	Sept. 8, 1923. 931 Sept. 30.	Even. 14·6 14·9	29.5	14.75	3.95 9.53 13.48 0.58	11.6	1.41	5.64	80 to 61	63.6	63.6		63.6	
923).	Thor Jessic	Sept. 8	Mom. 15·1 15·0	30.1	15.05	3 69 9.21 12.90 0.55	11 0	1 · 39	5.56	29.8 22 (11 )	63	63		63	
Born on or after 1st August, 1923)	12th.	24.	Even. 12.5 13.7	26.2	13.1	3.50 9.40 12.90 0.46	8.5	1.23	4.92						
lst Au	57 Chalfield Rose 12th.	Jan. 31, 1924. 1,241 Oct. 4. 14	Aft. 15·1 14 4	29.5	14.75	5.03 9.39 14.42 0.74	14.80	1.39	5.56	41.05 83.0 15.52	9.68	89.6	1	9.68	2nd Prize.
AFTER	Chalf	Ja	Morn. 13·3 13·1	26.4	13.2	3.42 9.52 12.94 0.45	9.00	1.26	5.04						
ON OR	56 Thelveton Wild Lilac.	ar. 30, 1924. 999 Sept. 29. 19	Even. 14.8 12.5	27.3	13.65	3.12 8.56 11.68 0.425	8.5	1.17	4 68	27.95 17.9 9.44	55.3 10 0	89		45.3	
BORN	Their Wild	Mar. 30, 1924. 999 Sept. 29. 19	Morn. 15·3 13·3	28.6	14.3	3.28 8.34 11.62 0.47	9.4	1 19	4.76			45			
	1:	1111	: :	:	:	1:11	:	:	:	<u>, : : :</u>	::	MILK	:	:	:
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:	::	::::	day 1 day	Total	Av	at olids o otal St it, in 11	ts mult	dids of	ts mult	ik (ibs. t (ibs. ids otb	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	şp
	::	in 1bs.	ik, 1st ik, 2nd			of S T	f Poin	t of So	f Point	t of Mil t of Far of Sol	Tot	Tor	Pot	TO	l Awar
	Number Name	Born in Live weight, in 1bs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day	0		Percentage Fat Composition of Solids other than Fat the Milk. Total Solids Actual weight of Fat, in Ihs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in 1bs.	Calculation of Points multiply by	Points—For weight of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (					Remarks and Awards

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72 estone urneen.	2, 1924. 242 t. 16.	Even. 15·5 16·1	31.6	15.8	II .	10.9	1.48	5.92	2.4 2.0 3.0	5.4	₹-0		. 4.9	
7 Bidde Mavor	Jan. 13 1,2 Sepl	Morn. 17·1 16·1	33.2	16.6	3·04 9·12 12·16 0·505	10.1	1 52	80 9	82 12 12	39	39		9	
Lizzie	1924. 31 22.	Even. 12·7 11·5	24.2	12.1	3.81 9.33 13.14 0.46	9.2	1.16	4 64	.36	80	8	.7	.5	
7] Beanacre	April 3 1,10 Aug.	Morn. 12 6 18·4	26.0	13.0	2 73 9.09 11.82 0 355	7.10	1.18	4.72	255 116 9	1020	40	1	42	
y 4th.	#i	Even. 11.9 11.8	23.7	11.85	3.39 9.57 0.4	8.0	1.13	4.52						
70 Ils Lawsle	1,28, 192 1,058 Aug. 31.	Aft. 11 · 3 12 · 7	24.0	12.0	3.02 9.70 12.72 0.36	7.20	1.16	4.64	35.60 21.90 13.64	71.1	61 - 1	8.0	61.9	
Longhil	Api	Morn. 12·1 11·4	23.5	11.75	2 86 9.46 12.32 0.335	2.9	1.12	4.48						
30th.	တ်	Even. 10 · 4 9 · 9	20.3	10.15	3.67 9.37 13.04 0.37	7.4	0.95	3.80						ıded.
69 ale Belle	20, 192 1,020 Aug. 31. 48	Aft. 11·1 10·6	21.7	10.85	3.98 9.51 13.44 0.425	8.50	1.03	4.12	32.55 24.1 12.12	88.8	8.89	8.0	9.69	Highly Cômmended.
Тhоги	Dec	Morn. 12 2 10 ·9	23.1	11.55	3.55 9.13 12.68 0.41	8.20	1.05	4.20						Highly
horpe tess 5th.	1923. 52 31.	Even. 16·6 17·1	33.7	16.85	4.21 8.73 12.94 0.71	14.2	1.47	5.88	45 8 68	ø,	6	0	6.	rve.
Kingst Coun Ruby	Sept. 7, 1,16 May 14(	Morn. 17·2 16·0	33.2	16.6	3.83 8.75 12.58 0.63	12.6	1.45	5.80	33 26 11	71	71.	10	81	Reserve.
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1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140   1,140	Sept. 7, 1923   Thorndale Belle 30th   Longhulls Lawsley 4th   Beanacre Lizzie   Biddee Maroum Kuby 6th   Sept. 7, 1923   L,020, 1923   Aug. 31   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 32   Aug. 31   Aug. 31   Aug. 31   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Born	N	May 18, 1924. 1,138 Sept. 23. 25	Aug. 1	Aug. 16, 1923. 1,198 Oct. 5.		Jan. 30, 1924. 1,010 Sept. 19. 29	De	Dec. 10, 1923 1,261 May 13. 158	85	. Aı	Aug 7, 1923. 1,244- Sept. 2. 46	20
Weight of Milk, 1st day Weight of Milk, 2nd day	Morn 12.4 15.1	n. Even. 4 13·8 1 13·6	Morn. 23.9 19.2	Even. 23.3	Morn. 16·6 16·0	Even 17 0 16 1	Morn. 12.9 12.5	Aft. 12·2 11·9	Even. 11 9 12·9	Morn. 10·3 10·9	Aft. 12 1 11 · 6	Fven. 11 9 10·8
Total	27	5 27.4	43.1	39.9	32 6	33 1	25 4	24.1	8 77	21 2	23 7	7.55
Average	13.75	75 13.7	21.55	19.95	16.3	16 55	12.7	12 05	12.4	10.6	11.85	11.35
Percentage Fat Composition of Soilos other than Fat Total Soilos Total Actual weight of Fat, in Ibs.	4.79 9.73 14.52	79 4.87 73 9.29 52 14.16 56 0.665	3.87 9.29 13.16 0.83	3.42 9.50 12.92 0 68	3.39 9.19 12.58 0.55	3.59 9.35 12.94 0.59	2.80 8.90 11.70 0.36	3·04 9 24 12 28 0 365	3.24 8 80 12 04 0 4	3 74 9 06 12 80 0 40	3.99 - 9.29 13 28 0 47	3.81 9.83 13.14 0.43
Calculation of Points multiply by 20	13.2	2 13.3	16.6	13.6	11.0	11 8	7.20	7 30	8 0	8 00	07-6	9.8
Actual weight of Solids other than Fat, in lbs.	1.34	34 1.28	2.0	1.90	1.5	1 55	1.13	1.12	1 09	96.0	1.1	1.06
on of Points multiply by 4	5.36	36 5.12	8 0	9 1	0.9	6.2	4 52	4 48	4 36	3.84	<b>†·</b> †	4.24
Points— For Weight of Milk (lbs.) For Weight of Fat (lbs. × 20) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	I	27.45 26.5 10.48	4.82.11	41 5 30.2 15.6	잃었다	32.85 22.8 12.2		87 15 22.50 13 36			$\begin{array}{c} 33 & 80 \\ 26 & 0 \\ 12 & 48 \end{array}$	,
Total Points for Milk Deductions	l	64.4	φ '	87.3	67	6 2		73 0 10 · 0			72 3	,
. TOTAL POINTS GAINED FOR MILK	<u> </u>	64.4	8	87.3	67	67.9		63.0			72.3	
Pomts for time since Calving		1						11.8			9.0	
TOTAL POINTS GAINED		64.4	òo	87.3	67	6 2		74.8			72.9	
Remarks and Awards	<u> </u>		3rd Priz Shoi Society	3rd Prize; Equal, Shorthorn Society's Prize.	Hig	Highly Commended.	Highl	Highly Commended.	ended.	Hıghl	Highly Commended.	ended.

Class 3.—DAIRY SHORTHORN HEIFERS (Born on or after 1st August, 1923)—Continued.

1	CLASS 3.—DAIKY SHUKIHUKN	י איייטד	LEILER	HELFENS (BUKN UN	NO N	OK AFTE	101 3	accana,	AFTER 1ST AUGUST, 1923) Continued.	COMPER	nen.	
	Number	[werne]	87 Iwerne Mary Duchess	hess 3rd.	8 Ashe	88 Ashe Cran	Plas Janet	89 Plas Power Janette 2nd	9 Fox Bride	90 Foxbury Bridesmaid	g Greatter	91 Greattew Madge.
	Born ins I.ive weight, in lbs	0	Oct 27, 1923. 1,070 Oct 1. 17	83	Nov 1,1,1 Sept	Nov 1, 1923. 1,191 Sept. 13.	Jan. 1 1,0 Sepi	Jan. 1, 1924. 1,090 Sept. 12. 36	May 8 1,1 Oct	May 8, 1924. 1,120 Oct. 1. 17	Sept 1,1 May	Sept 2, 1923 1,178 May 23. 148
	Weight of Milk, 1st day Weight of Milk, 2nd day	Morn. 14.0 14.3	Aft 15 0 14.8	Even. 15 1 14 6	Morn. 13 7 14 4	Even. 13 7 15·2	Morn 20 2 20 0	Even 19 4 20·2	Morn 17 2 17 3	Even. 16 9 17·1	Morn. 16 9 16 9	Even. 16 7 15 7
	Total	28.3	8.65	29.7	28.1	28.9	40.3	39 6	34 5	34 0	83 8	32.4
	Average	14.15	14.9	14.85	14.05	14.45	20.1	19 8	17 25	17.0	16 9	16.2
	Percentage Frat Composition of Solids other than Fat Total Solids Actual weight of Fat, in Ibs.	3.58 9.56 13.14 0.51	5.04 9.30 14.34 0 75	4.71 9.25 13.96 0.70	3.56 9.18 12.74 0.50	3·19 9 27 12 46 0 46	4.59 9.05 13.64 0 92	2 64 9 16 11 80 0 52	8 83 9.41 12.74 0 57	3 53 9 55 13 08 0 60	3 64 8 72 12 36 0 62	3 63 8·79 12 42 0 59
	Calculation of Points multiply by 20	10.20	15 00	14 0	10 0	9.3	18.4	10.4	11 4	12.0	12.4	11 8
	Actual weight of Solids other than Fat, in lbs	1.35	1 385	1 37	1 29	1 34	1.82	1 81	1 62	1 62	1 47	1.42
	Calculation of Points multiply by 4	. 5·40	5 54	5.48	5.16	5 36	158	7.24	87 9	8F 9	5 88	5 68
	For weight of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (lbs. $\times$ 4)	ne suspende a mine such	43.90 39.2 16.42		28 119 10	13 61 1 <u>2</u>	888	39.9 28 8 14 52	87 87 87	34 25 23 4 12.96	88 77 11	33 1 24 2 11 56
	Total Points for Milk Deductions		99 5		58	21	73	910	67	9 0	89	8 9
	TOTAL POINTS GAINED FOR MILK		99 5		58	্ব	63	3 -5	7.0	70.6	89	6
	Points for time since Calving	•	1						'		10	œ
	TOTAL, POINTS GAINED		99 5		58	58.5	9	63.2	0.2	9	79	2
	Remarks and Awards	. 1st Shortho	1st Prize; Equal, Shorthorn Society's Prize.	qual,			F. W. Margariti de do		Hig	Highly Commended	Нів	Highly Commended.
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	97 Orfold Gentle 10th.	Feb. 23, 1924. 1,049 Sept. 2. 46	m. Even. 7 18·2 7 17 6	4 35.8	2 17 9	23 2.54 03 9.56 26 12.10 62 0.455	4 9.1	1.74 1.71	6.96 6.84	37·1 21·5 13 8	72.4 10.0	62.4	9 0	63.0	Andrew Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the
		F	Mom. 18·7 19·7	38.4	19.2	3.23 9.03 12.26 0.62	12.4	Ė	9						
1	96 Orfold Lily 3rd.	Jan. 21, 1924. 1,100 Oct. 5. 13	Even. 14·8 17·4	32.2	16.1	4.04 9.70 13.74 0 65	13.0	1 56	6.24	81 - 45 22 0 11 - 92	65.4 10 0	55 4	1	55.4	
6-6-	Orfold	Jan. 2	Morn. 14·5 16·2	30.7	15.35	2.92 9.28 12.20 0.45	0 6	1.42	5 68	8011	1	7.0		LG	
or tropper, teal	95 Kelmscott Rose 89th.	Dec 24, 1923. 1,032 Sept. 10	Even. 15·4 16·4	31.8	15.9	5.50 8.54 14.04 0.875	17.50	1.36	5.44	31.7 35.7 10.84	2 87	78 2		78.2	Highly Commended.
4	Keh Rose	Dec 1	Morn. 16·1 15·5	31 6	15.8	5.77 8 57 14 34 0.91	18.2	1 35	2.40		2	[-		-	Comir
N OIN W	94 Sudborough Louise 3rd.	oril 24, 1924. 1,125 Sept. 20. 28	Even. 12·0 12·0	24.0	12 0	3.48 9.14 12 62 0 42	8.4	1.10	4 40	23.55 14.8 8 6	47.0 10.0	87.0		37.0	
COLVER	9 Sudbo I,ous	April 24, 1924. 1,125 Sept. 20. 28	Morn. 11 9 11 2	23.1	11.55	2.75 9.07 11 82 0.32	6.4	1.05	4 20	23 14 8	47	37		37	And the second second
CLASS 3 DALKY SHOKIHOKN HEIPENS (BOKN ON OK AFFEN 131	93 Greattew Christmas Eve.	Dec. 24, 1923. 1,181 Sept. 17. 31	Even. 17.7 16 2	88 9	16.95	4.75 8.99 13.74 0.805	1.91	1.52	6 08	83.75 82.1 12.08	6 22	6.77		6.77	Highly Commended,
200	Gre Christi	Dec. 9	Morn. 17·4 16·2	33.6	16.8	4.77 8.97 13.74 0.80	16.0	1.50	0.9	885	7	7		1,	Comi
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	Number Name	Born i Live weight, in 1bs Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Frat Composition of Solids other than Fat the Milk. [Tokal Solids Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by	For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. ×					Remarks and Awards

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	104 Rosaline.	Unknown. 1,263 June 2. 138	Even. 27·3 24·4	51 7	25.85	4.05	1	1	1	111	11	I	1		Disqualified,
	Ro	Und L	Morn. 26 9 24·3	51.5	25.6	8·41	1	1	1						Disq
	102 Quarrendon Daffodil.	42 42 30.	Even. 35·4 32·2	9.29	33 8	3 94 9 00 12 94 1 33	26.6	3.04	12.16	70·1 51·4 24·92	₹.	4.	6.0	65.	lst Prize.
ов 2).	10 Quarr Daff	Sept. 2, 1919. 1,342 Aug. 30. 49	Morn. 38·8 33·8	72 6	36.3	3 43 8 77 12 20 1 24	8-1-8	8.19	12.76	70 51 24	146.4	146.4	0	147.3	1st F
SSES 1			Even. 18 9 20 8	39.7	19.85	4.73 9.03 13.76 0.94	18 8	1.79	7.16		***************************************				forrison ; Dauy tation's
R CLAS	101 Spot.	Feb 6, 1915. 1,549 Sept. 21. 27	Aft. 22.8 20.5	43.3	21 65	5 08 8.88 13.96 1 10	22 00	1.93	7.72	63.65 59.8 22.84	146.3	146 3		146.3	2nd Prize; Morrison Challenge Trophy; Darry Shorthorn Association's Prize
BLE FO			Моги. 22 0 22 3	44.3	22 15	4.28 8 94 13 22 0 95	19.00	1.99	96.2						2nd Pr Challeng Shorthor
(NOT ELIGIBLE FOR CLASSES	o son.	9. 06 7	Even. 26.0 27.0	53 0	26.5	8.71 11.71 0.795	15.9	2.30	9.5	54.35 33.9 18.4	2.0	-7	2.7	4.	
	100 Harrison,	1919. 1,406 Aug. 12. 67	Morn. 28·0 27 7	55.7	27.85	3.23 8.21 11.44 0.90	18.0	2.3	9.5	33 18	106.7	2.96	2	99.4	
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SHORTHORN	98 Evensia.	1921. 1,315 Sept. 24. 24	Aft. 21·4 20 7	42.1	21.05	4.99 8.87 13.86 1.05	21 00	1.87	7.48	62.95 50.0 22.16	135.1 10.0	125.1	1	125.1	3rd Príze.
			Моги. 21.7 20.5	49.2	21.1	3.45 8.47 11.92 0.73	14.60	1.99	7.16						
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SHORTHORN	
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112 Damsel.	1919. 1,324 Aug 3	Morn. Even. 26 3 25.7 24 9 21 9	51.2 50 6	5 6 25.3	9.67 3.47 9.15 8 71 11 82 12 18 0.68 0 88	13.6 17.6	2 34 2.20	9.36 8.80	50 9 31.2 18.16	100 3 10 0	90.3	3.6	93.9	
manife recovery and analysis.		Even. Mo 19 3 26 21 0 24	40 3 51	20 15 25	2.59 8 88 11 44 0.52	10.4	1.78	7 12   8						
111 Sweet Pea.	Unknown, 1,378 Sept. 23. 25	Aft. 19 4 20·8	7. O <del>‡</del>	20 1	8 35 8 79 12 14 0 67	13 40	1.77	7 08	60 65 39 3 21 · 12	121 · 0 20 0	101 0	1	101 .0	
		Morn. 19·2 21 6	8 0#	30.4	88 51 65 22 57 0 72 52	15.40	1 73	6.95						
107 Cowslip.	Unknown. 1,280 Oct 3 15	Even 25 0 25 4	50.4	25.2	4·51 9·19 13 70 1·135	99 70	2.32	9 28	48.0 35.3 17.32	100.6 10 0	9.06		9 0	
Cov	Unk 1, 0c	Моги. 25·9 19 7	45 6	22.8	2.75 8.81 11.56 0 63	12 6	2 01	8 04	4 gg L	100	9(		06	
105 Queen.	1919 1,282 Sept. 12.	Even. 28 4 26 0	54 4	27.2	3 32 9 36 12 68 0 91	18.2	2.54	10.16	54.95 37.9 20.4	8.1	60	1	60	Reserve.
20m	19 1,5 Sept	Morn. 28 0 27 5	55 5	27 75	3.55 9 23 12 78 0.985	19.70	2.56	10 24	20 20	113.3	113.3	1	113	Rese
Number Name	Born in 1bs	Weight of Milk, 1st day	Total	Average	Percentage { Fast Composition of Solids other than Fat the Milk. { Total Solids Actual weight of Fat, in lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4 Points—	For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	Total Points for Milk	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	Remarks and Awards

CLASS 6.—LINCOLNSHIRE RED SHORTHORN COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK OF THE

	134. Laugtord Damsel 21st	Oct 9, 1921 1,347 Oct 1, 17	rn Even. 8 33 6 5 31 2	3 648	65 32 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	4 33 0	1 2 92	4 11 68	67 05 68.4 24 08	159 5	159 5	I	159 5	Ist Prize and Reserve for B D F A Supreme Individual Challenge Trophy
		0	Morn 34 8 34·5	69	25 34		35	33	96 12						Ist P for B Indi
	ıpy 4th.	1920.	Even. 19 2 19 3	38 5	19	3 94 9 04 12.98 0.76	15 2	1.74	9	88 88					ze.
	132 Burton Hempy 4th.	Feb. $\frac{21}{1.236}$ Sept $\frac{27}{21}$	Aft 19 6 20 5	40 1	20 05	8 79 8 79 13.52 0.95	19 00	1 76	10 %	59 20 8 8	125 7	115.7	1	115.7	3rd Prize.
ON).	Burt	Ĥ	Moru. 20·1 20 3	Ŧ 0Ŧ	20 2	2 75 8 50 11 25 0 555	11 1	1 73	88 9						
LINCOLNSHIRE RED SHORTHORN ASSOCIATION)	129 Burton Vic 19th.	g 29, 1922 1,460 Sept 9.	Even. 20 0 19 7	39.7	19 85	3.93 9.17 13.10 0.78	15 6	1.82	85 1	40 1 28 3 14·24	9 7	9 ?		9 3	
HORN A	129 Burton V	Aug 21,	Morn. 20·7 19 8	40 5	20 25	8 18 8 59 111.72 0.635	12 70	1 74	96 9	987 FT	8	82		85	_
SHORT	stic.	918.	Even. 19·9 19 4	39.3	19 65	3.35 9.01 12.36 0.65	13 0	1.77	7.08						
re Red	125 Scothern Mystic.	May 26, 1918. 1,458 Aug. 30. 49	Aft 21.1 21.9	43.0	21.5	4 53 9·01 13·54 0 97	19.40	1.94	92 2	61.60 47.4 22.04	131.0	131.0	6.0	131.9	2nd Prize.
OLNSHI	SS .		Morn. 19 7 21 2	6.0#	20 45	3.66 8.82 12.48 0.75	15.00	1.88	7.30						
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	Number Name	Born Lave weight, m lbs. Last Calved Days smee Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat Composition of & Solids other than Fat the Milk. Total Solids Actual weight of Fat, in lbs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs					Remarks and Awards
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CLASS 7.—LINCOLNSHIRE RED SHORTHORN HEIFERS (ENTRED IN OR ELIGIBLE FOR THE HERD BOOK OF THE TRACT REPORTED BY SHORMEDRY ASSOCIATION RODY ON OR APPER 18TH AUGUST 1923)	Воок ог тив	
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CLASS 7.—LINCOLNSHIRE RED SHORTHORN HEIFERS (ENTER	ED	NO
CLASS 7.—LINCOLNSHIRE RED SHORTHORN HEIFERS	Ε	Robe
CLASS 7.—LINCOLNSHIRE RED SHORT	HORN HEIFERS	MOTOR ASSOCIATION
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	CLASS 7.—LINCOLNSHIRE	THEN TOWN I

		LING	OLNSI	IIRE	KED	SHORT	HORN A	LINCOLNSHIRE RED SHORTHORN ASSOCIATION.		BORN ON		OR AFTER IST.	AUGUS	AUGUST, 1923)	٠		
Number Name	::	1:	::	. :	::	Bend	137 Bendish Lass 11th,	11th.	139 Burton Ethel 10th.		1. Burton 21	140 Burton Sylvia 2nd.	Burton	142 Burton Buttercup 13th.	up 13th.	Langfor	143 Langford Polly 21st.
Born I ive weight, in 1bs. Last Calved Days since Calving	: . :	: : : :	::::	: · ·	1 ::::	ŏ	Oct. 22, 1923. 1,040 Sept. 10. 38	89	Aug, 25, 1923. 1,168 Oct. 1.		0ct. 5 1,1 0cd	Oct. 5, 1923. 1,192 Oct. 2. 16	, i	Jan. 8, 1924. 1,054 Sept. 22. 26	. <b>4.</b>	Sept. 2	Sept. 27, 1923. 1,118 Sept. 23. 25
Weight of Milk, 1st day Weight of Milk, 2nd day	day 1 day	::	. :	::	. :	Morn 19·6 15·4	Aft. 16:6 14:9	Even. 17·1 14·0	Morn. 18 9 19 6	Even. 18·2 19·3	Morn. 15·7 15·9	Even. 16 1 16 3	Morn. 15 1 15 6	Aft. 15·1 14·6	Even. 14 8 14 4	Morn. 23·0 23·7	Even. 21.4 21.2
	Total	tal	:	:		35.0	31.5	31.1	38.5	37.5	31 6	32.4	30 7	29 7	29.2	46 7	42 6
•	Av	Average		:	:	17.5	15.75	15.55	19.25	18.75	15 8	16 2	15.35	14.85	14 6	23.35	21.3
Percentage Fat Composition of A Solids other than Fat the Milk. Total Solids Actual weight of Fat, in Ibs.	at olids o otal Se it, in 11	ther tholids	an Fat	::::	<u> </u>	3 60 8 50 12 10 0 63	3 38 8·62 12·00 0·53	3 28 8·32 11·60 0·51	4·13 9·27 13·40 0·795	4 38 9 42 13 80 0 82	4 27 9.39 13.66 0.68	5.46 9 83 15 30 0 87	3 79 8·79 12·58 0 58	4.33 9.11 13.44 0 64	4·10 8·88 12 98 0·60	$\begin{array}{c} 5.83 \\ 8.63 \\ 14.46 \\ 1.36 \end{array}$	3.75 8.83 12.58 0.79
Calculation of Points multiply by 20	s mult	iply by	, 20	;	:	12.60	10.60	10.3	15 9	16.4	13.6	17.4	11.60	12.80	12.0	27.2	15 8
Actual weight of Solids other than Fat, in Ibs.	o spile	ther the	an Fat	in Ibs		1.49	1.36	1.29	1.78	1 76	1.48	1 59	1.35	1.35	1 30	2 01	1.86
Calculation of Points multiply by	s mult	iply by	4	;	·	5.96	5.44	5.16	7.12	7 04	5.92	6.36	5.40	5.40	5 2	8.04	7.44
Fourse. For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat	k (lbs. t (lbs. ids oth	) × 20) ter than	 1 Fat (	:::«(lbs: ×	:: <sub>=</sub>		48·80 33·4 16 56		38 32 14	38.0 32.3 14.16	32 31 112	32·0 31·0 12·28		44.80 36.4 16 0		444	44.65 43.0 15.48
Tot	Total Point Deductions	Total Points for Milk Deductions	Milk .:	::	- ::		98 8 10·01		84.	84.5	7.5	75.3		97.3		109	103.1
Tol	AL Po	TOTAL POINTS GAINED FOR MILK	AINED	FOR M	LK.		88.8		84	84.5	75	75.3		97.2		103	103·1
Poi	its for	Points for time since Calving	ince Ca	lying	' :		1		I					1		•	1
TO	CAL, P	TOTAL POINTS GAINED	S GAL	KED	:		88.8		84	84.5	75	75.3		97.2		108	103·1
Remarks and Awards	S.	i	:	:	: [		3rd Prize.		Reserve.	rve.	Hig	Highly Commended.		2nd Prize.	ai	1st	lst Prize

CLASS 7.—LINCOLNSHIRE RED SHORTHORN HEIFERS   CLASS 8.—BRITISH FRIESIAN COWS (ENTERED IN OR ELIGIBLE (BORN ON OR AFTER 18T AUGUST, 1923)—Continued. FOR THE HERD BOOK. BORN ON OR PREVIOUS TO 1ST AUGUST, 1921)	RTHOR 1923)—(	N HEI	FERS	CLASS 8.—BRITISH FOR THE HERD BOOK.	S.—BR.	ITISH 1 Book.	FRIESI BORN C	AN COV	RIESIAN COWS (Entered in or Eligible Born on or previous to 1st August, 1921)	TO IST.	A OR EL	инительной и 1951).
Number		145 Scothern Cowslip 5th.	p 5th.	Terl	147 Terling Trix 4th.	4th.	Terlıı	148 Terling Torch 13th.	13th.	Terlir	149 Terling Warner 3rd.	r 3rd.
Born	) <del>                                     </del>	Jan. 7, 1924 1,222 Oct. 4.	7.	No	Nov. 22, 1917. 1.380 July 30. 80	17.	й	Nov. 25, 1917. 1,468 Sept. 23. 25	17.	W	Mar. 25, 1917. 1,554 Sept. 14. 34	17.
Weight of Milk, 1st day	Мота. 12·2 12·7	Aft. 13·2 12·5	Even. 11 9 13·1	Моги. 24·1 23·7	Aft. 21·3 21·9	Even. 19·8 21·6	Моги. 21 ·8 22 5	Aft. 23·4 22·3	Even. 20·0 22 0	Morn. 23 8 25·4	Aft 25 4 25·3	Even. 25.2 23.5
Total	6-7-3	25.7	25.0	8.71	43.2	11.4	44.3	45.7	43.0	₹6.5	50.7	48.7
Average	12.45	12.85	12.5	23.9	21.6	20.7	22 15	22.85	21.0	24.6	25.35	24 35
Percentage Fat Composition of Solids other than Fat the Milk. (Total Solids Actual weight of Fat, in lbs	3.48 9.66 13.14 0.435	4 43 9·55 13·98 0 57	4.21 9 43 13 64 0.53	3.90 8.94 12.84 0.93	4 55 9 27 13 82 0 98	4·10 9·38 13·48 0·85	4.12 9.16 13.28 0.91	4.77 9.37 14.14 1.09	4 58 9 28 13 86 0 96	3 65 9.07 12.72 0.90	4 18 9 22 13.40 1.06	4.15 9 19 13.34 1.01
Calculation of Points multiply by 20	8.70	11.40	9.01	18.60	19.60	17.0	18 20	21.80	19 2	18 0	$21 \cdot 20$	20.5
Actual weight of Solids other than Fat, in lbs	1.20	1.23	1 18	2.14	2.00	1.94	5.03	2 14	1 94	2 23	2.34	5 54
Calculation of Points multiply by 4	4.80	4.92	4.72	8.56	8.00	92.1	8 12	8 56	7.76	8.92	98.6	8.96
For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)		37.80 30.7 14.44			66.2 55.2 24.32			66 00 59.3 24 44			74 3 59.4 27.24	
Total Points for Milk Deductions		85.9			145.7			149 6			160.9	
TOTAL POINTS GAINED FOR MILK		82.9			145.7			149 6			160.9	
Points for time since Calving		1			0.#			ı			1	
TOTAL POINTS GAINED		85.9			1.611			149.6			160.9	
Remarks and Awards		Highly Commended.	ıded.	Hıghi	Highly Commended	nded	High	Highly Commended.	ended.		Reserve	

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Deci. 8, 1920.   Light	22	Lavenh  Ma  Morn. 28 7 28 7 28 7 29 8 7 20 4 20 4 9 4	Lavenham Wallen 2nd.  May 28, 1918.  1,405	8. 8. 8. 1. 1. 2nd. 1. 1. 2nd. 1. 1. 2nd. 1. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	Pent Morn Morn D D D D D D D D D D D D D D D D D D D	Dec 16, 1920  1,623  Aug. 5  Aug. 5  Aug. 5  1,623  Aug. 5  1,623  Aug. 5  1,623  Aug. 5  1,623  1,623  1,623  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  1,633  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Remarks and Awards preme Individual Challenge Trophy Bartham Cup. Spencer Cup. Shrifev Cup.	D.F.A. Su- nal Challenge rham Cup, Shriley Cup,		3rd Prize.		Ī	Dısqualıfied.	.d.	Hıgh	Highly Commended.	ended,

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8.—BRITISH
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11)—Continued.	f Troy. Bulkeley Colanthe.	8, Feb. 25, 1919. 1,484 Aug. 12. 67	Even. Morn. Aft. Fven. 26.9 24.0 23.6 23.6 26.9 24.0 24.2 25.4	53.8 48.0 47.8 49.0	26.9 24.0 23.9 24.5	3.31     3.08     3.44     3.01       8 47     8.56     8.50     8.39       11.78     11.64     11.94     11.40       0 89     0.74     0.82     0.74	17 8 14 8 16 4 14.8	2 28 2 05 2 03 2 05	9.12 8.20 8.12 8.20	72.4 46.0 24.52	142 9	132.9	2.1	135 6	nded. Highly Commended.
Ist August, 192	169 Bulkeley Helen of Troy.	Dec. 30, 1918. 1,326 Sept. 12. 36	Morn. Aft. 25.4 25.6 25.9 26 0	51.3 51.6	25.65 25.8	3 93 3 64 8 57 8 84 12 50 12 48 1 02 0 94	20.4 18 8	2.20 2.28	8.8 9.12	78 85 57.0 27.04	162.4	152.4		152.4	Highly Commended.
ON OR PREVIOUS TO	162 Winchester Musk,	Dec. 20, 1920. 1,375 Aug 27. 52	Motn. Aft. Even. 25.5 26 8 28 0 27.8 24.6 23 7	53.3 51.4 51.7	26.65 25.7 25.85	4.85     3.43     3.40       8.50     8.55     8.46       13.35     11.98     11.86       1.29     0.88     0.88	25.8 17.6 17.6	2 27 2 2 20 2 20	9.08 8.80 8.80	78·20 61·0 26·68	165 9 10·0	155 9	1.2	157 1	Highly Commended.
ESIAN COWS (BORN	160 Muntham Troublesome.	June 12, 1919. 1,295 Sept. 16. 32	Morn. Aft Even. 20·2 23·0 24·3 23·4 24·5 26·0	43.6 47.5 50.3	21.8 23.75 25.15	6 37 5.53 4.01 8.59 8.65 8.51 14.96 14.18 12.52 1.39 1 31 1.01	27.8 26.2 20.2	1.87 2 06 2.14	7.48 8.24 8.56	70 · 70 74 · 9 24 · 28	169.2	169.2		169.2	2nd Prize.
CLASS 8.—BRITISH FRIESIAN COWS (BORN ON OR PREVIOUS TO IST AUGUST, 1921)—Continued	Number	Born with in lbs	Weight of Milk, 1st day Weight of Milk, 2nd day	Total	Average	Percentage Fat Composition of Solds other than Fat	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Calculation of Points multiply by 4 Points—	For weight of Milk (ibs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (lbs. $\times$ 4)	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL POINTS GAINED	Remarks and Awards

nued.															
21)—Conti	1922) nd	921.	Even. 25 6 22 8	18.4	24.2	3.41 8.99 12.40 0.825	16 5	2.18	8.72		Ī				ended.
'ST, 19	172 Lund (Imp 1922) Blanche 22nd	April 26, 1921. 1,451 Sept 2. 46	Aft. 23 8 22.22	46.0	23.0	4 07 8 87 12 94 0 94	18.8	5 04	8.16	72.7 55.0 25.84	153.5	153.5	9.0	154 1	Highly Commended.
T AUGU	L,unc	Αp	Morn. 25·5 25·5	91.0	25.5	3.86 8.78 12.64 0.985	19-7	76 G	96 8						Highl
s To Is	gnes.	1-	Even. 21 9 23.4	45 3	22 - 65	3 37 9 01 12 38 0 76	15.2	5 04	8.16						nded.
PREVIOU	171 Hawthorne Agnes.	Oct. 1, 1917 1,376 Aug 25 54	Aft. 23·3 24 4	47.7	23.85	3 52 9 06 12 58 0 84	16.8	2 16	8.64	69 55 47.5 25 08	142.1	142.1	1.4	143.5	Highly Commended.
ON OR	Haw	0	Мотп 21 7 24·4	46.1	23.05	3.36 8.98 12.34 0 775	15.5	2.07	8.28						High
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IAN (	:	. : : :	::	tal		other than I olids bs	tiply by 20	ther than	tiply by 4	, × 20) her than F	ats for Mil 18	INTS GAIN	time since	POLYTS	i
RIESIAN (		:::::		Total	Average	at odids other than I otal Solids tt, in Ibs.	ts multiply by 20	olids other than	is multiply by 4	lk (lbs.) t (lbs. × 20) ids other than F	al Points for Mil luctions	AL POINTS GAIN	ats for time since	FAL POINTS	
SH FRIESIAN (		:::::		Total		Fat Solids other that Total Solids	f Points multiply by 20	t of Solids other than	Points multiply by 4	of Milk (lbs.) of Fat (lbs. $\times$ 20) of Solids other than F	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL POINTS GAINED	
RITISH FRIESIAN (	:::::::::::::::::::::::::::::::::::::::	:::::		Total		بي.	tion of Points multiply by 20	weight of Solids other than	tion of Points multiply by 4	weight of Milk (lbs.) weight of Fat (lbs. × 20) weight of Solids other than F	Total Points for Mil Deductions	TOTAL POINTS GAIN	Points for time since	TOTAL POINTS	
.—BRITISH FRIESIAN (	:::::::::::::::::::::::::::::::::::::::	reight, in Ibs alved since Calving		Total		بي.	2 calculation of Points multiply by	Actual weight of Solids other than	Salculation of Points multiply by 4	ight of Milk (lbs.) light of Fat (lbs. × 20) light of Solids other than	Total Points for Mil Deductions	TOTAL POINTS GAIN	Points for time since	TOTAL POINTS	
ASS 8.—BRITISH FRIESIAN (	::	50 gn	Weight of Milk, 1st day Weight of Milk, 2nd day	Total		<u></u>	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Calculation of Points multiply by 4	For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than F	Total Points for Mil Deductions	TOTAL POINTS GAIN	Points for time since	TOTAL, POINTS	Remarks and Awards
CLASS 8.—BRITISH FRIESIAN COWS (BORN ON OR PREVIOUS TO IST AUGUST, 1921)—Continued.	:::::::::::::::::::::::::::::::::::::::	reight, in Ibs alved since Calving		Total		بي.	Calculation of Points multiply by 20	Actual weight of Solids other than	Calculation of Points multiply by 4	For weight of Mik (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than F	Total Points for Mil Deductions	TOTAL POINTS GAIN	Points for time since	TOTAL POINTS	
CLASS 8.—BRITISH FRIESIAN (	:::::::::::::::::::::::::::::::::::::::	reight, in Ibs alved since Calving		Total		بي.	Calculation of Points multiply by 20	Actual weight of Solids other than	Calculation of Points multiply by 4	For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Fat (lbs. × 20) For weight of Solids other than F	Total Points for Mil Deductions	TOTAL POINTS GAIN	Points for time since	TOTAL POINTS	

CLASS 9.—BRITISH FRIESIAN COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. RORN APPER 1971)

Born after 1st August, 1921, and previous to 1st August, 1923)	PER L	sr Augi	rsr, 192	11, AN	D PRE	VIOUS 1	ro Isr	Argust	r, 1923)				
Number	:	17 Hensted	173 Hensted Eleanor.		Lu	174 Lund Juhet		Glym	175 Glyndebourne Celia	Celia	He	176 Hemsted Ellen.	len.
Born Live weight, in 1bs Last Calved Days since Calving	:	Mar. 20 1,3 June June 13	Mar. 20, 1922. 1,321 June 27. 113		umf 8	June 30, 1922. 1,498 Sept. 27	ai.	M	Mai. 14, 1922. 1.435 Sept. 1.	3	Ja	Jan. 27, 1922. 1,552 Sept. 30. 18	ci
Weight of Milk, 1st day	Morn . 18·3 . 11·9	rn Aft. -3 13·3	Even 3 12.0 8 9 5		Morn. 20 0 21 5	Aft 19 7 19 5	Even. 19 7 20 0	Morn 18 7 18 6	Aft 17 4 16 7	Even. 19 7 18 3	Morn 29 5 27 1	Aft 28 7 28 5	兵 68.0 28.0 28.3
Total .	30.2	25.1	51	5	41.5	39.2	39 7	37.3	34.1	38 0	56 6	57. 2	57 5
Average	15 1	1 19 55	55 10 75	-	20.75	19 6	19 85	18 65	17.05	19 0	28 3	9 87	28 6
Percentage Fat Composition of Solids other than Fat the Milk. (Total Solids Actual weight of Fat, in Ins.	, ; ; ;	3.32 8.60 8.60	2.86 8.36 8.36	8.50	3 05 8 55 11 60 0 63	3.24 8 64 11 88 0.635	3 33 8.47 11.80 0 66	3.61 13.51 0 67	2 93 8.67 11.60 0 50	3 79 8 57 12 86 0 72	3 20 8 58 11.78 0 905	3·19 8 55 11 74 0 91	8 · 14 12 · 70 1 18
Calculation of Points multiply by 20	l <u>'</u>			1	12 6	12.7	13 2	13 4	10 0	14 4	18 1	18 2	23.6
Actual weight of Soids other than Fat in Ils .	1				1.77	1 69	1 68	1 58	1 48	1 63	2.43	5 44	2.45
Calculation of Points multiply by 4	١.				2 08	92.9	6 75	6 32	5.95	6.52	9 72	92 6	9.80
Points—For Weight of Milk (lbs.) For Weight of Fat (lbs. < 20) For weight of Solids other than Fat (lbs. > 4	.:4					60 20 38·5 20·56			54 70 37 8 18 76			28 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
Total Points for Milk Deductions	: :					119 3 10 · 0			$\begin{array}{c} 111 & 3 \\ 10 & 0 \end{array}$		_	174 7	
TOTAL POINTS GAINED FOR MILK	K.					109 3			101.3			174.7	
Points for time since Calving						1			1 0			1	
TOTAL POINTS GAINED	    -					109.3			102 0			174.7	
Remarks and Awards	:	Disqualthed	ilified.		Highly	Highly Commended.	nded.	High	Highly Commended.	ended.	1st Priz ham S	1st Prize; Reserve Bar- ham Cup; Reserve, Shirley Cup.	rve Bar- leserve, p.

Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   N	CLASS 9.—BRITISH FRIESIAN COWS (Born after 1st August, 1921, and previous to 1st August, 1923)—Continued	- MO	S (Bo	R AFT	ER IST	AUGUST	, 1921,	AND PRI	SUOIVE	ro lsr	August,	1923)—	-Contini	red.
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	::	:	Наш	177 els Elega	шсе.	Mac	179 knade H	oney.	Ma	180 pleton Gr	ace.	Thorj	182 je Mooi B	loem.
Morn, Aft, Byen, Aft, Byen, Aft, Byen, Aft, Byen, Aft, Byen, Aft, Byen, Aft, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen, Byen,	1111	1 111	Pr.	ly 5, 192 1,237 Aug. 11 68	oi	Ĕ	eb. 17, 19 1,312 Aug. 20 59	122.	S	pt 16, 19 1,372 Sept 25	555	At	1g. 10, 19 1,223 Sept. 22	15.
55-8         49-9         52-1         48         50-4         49-4         51-0         50-4         50-4         49-9         51-1         48-2         50-4         49-8         49-4         51-0         50-4         30-4         41-0         8-5         11-0         41-0         8-5         11-0         41-0         8-5         11-0         41-0         8-5         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0         11-0 </td <td>::</td> <td>  Relea</td> <td>forn. 6.5 8.8</td> <td>Aft. 25·4 24·5</td> <td>Even. 25 ± 26·7</td> <td>Mern. 24·3 23·9</td> <td>Aft. 26·5 23·9</td> <td>Even. 25.6 24.2</td> <td>Morn. 24·8 24·6</td> <td>Aft 25 5 25 5</td> <td>Even. 24 8 25 6</td> <td>Morn 17·4 19·0</td> <td>Aft. 20 8 20 2</td> <td>Even. 20 0 19 6</td>	::	Relea	forn. 6.5 8.8	Aft. 25·4 24·5	Even. 25 ± 26·7	Mern. 24·3 23·9	Aft. 26·5 23·9	Even. 25.6 24.2	Morn. 24·8 24·6	Aft 25 5 25 5	Even. 24 8 25 6	Morn 17·4 19·0	Aft. 20 8 20 2	Even. 20 0 19 6
	:		5.3	49.9	52.1	48 2	₹.09	8.67	49.4	51.0	50.4		41.0	39 6
	:		7.65	24.95	26.05	24.1	25.2	24.9		25.5		18 2	20.5	19.8
Be other than Fat, in lbs         17.9         17.9         18.90         16.6         18.4         17.0         19.1         20.0         21.0         21.0         21.2         15.2         1         21.2         21.2         21.2         21.6         21.6         21.7         21.3         22.4         16.3         18.1         18.1         18.1         18.1         18.2         18.2         21.6         21.6         21.7         21.3         22.4         16.3         18.1         18.1         18.1         18.1         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         18.2         <		1 1 1 1	3.24 8.80 2.04 0.895	3 59 9·03 12·62 0·895	3.52 8 64 12.16 0.915	3 43 8 63 12 06 0 83	3.63 8.59 12.22 0.92	3.41 8 67 12.08 0.85	3 87 8 79 12 66 0 955	1	4 17 8 89 13 06 1 05	3 62 8 96 12 58 0 0 66	8.82 11.52 0.76 0.76	4 55 8 69 13 24 0 90
ls other than Fat, in lbs 2-48 2-25 2-25 2-36 2-16 2-16 2-17 2-38 2-24 1-63 1 81  multiply by 4 69-72 9-0 9-00 8-32 8-64 8-64 8-64 8-68 9-32 8-96 6-52 7-24  (lbs.) 63-72 9-0 9-00 8-32 8-64 8-64 8-64 8-68 9-32 8-96 6-52 7-24  lbs. × 20] 78-65  Points for Mirk 160-5 151-8 162-5  FOUNTS GAINED D. MIRK 160-5  It POINTS GAINED 168-3  It POINTS GAINED 3rd Prize. Highly Commended. Reserve. Ilrighly Comment			6.7	17.9	18.30	16.6	18.4	17 0	19 1	20 0		13.2		18.0
multiply by \$\frac{1}{2}\$   9-72   9.0   9.00   8-82   8-64   8-64   8-64   8-64   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-65   8-	ight of Solids other than Fat, in 1bz.	<u> </u>	3-43	2.55	2.25	5.08	2.16	2.16	2.17	2.33	5.54	1.63	1 81	1.72
Ubs.	₩.		9.72	0.6	00.6	8.32	8.64	8.64	8.68					6.85
Points for Milk           160·5         151·8         162·5           Honris Gaixed For Milk         160·5         151·8         162·5           For time since Calving         2·8         1·9         —           L, POINTS GAIXED          168·3         153·7         162·5           L, POINTS GAIXED          3rd Prize         Highly Commended.         Reserve.	: : <u>a</u>			78·65 54·1 27·72			74.9 52.0 25.60			7.5 4 60·1 26·96		M Statement A	58.5 46.4 20.64	
POINTS GAINED         160·5         151·8         162·5           4. POINTS GAINED         2·8         1·9         —           A. POINTS GAINED         163·3         153·7         162·5            3rd Prize         Highly Commended         Reserve		<u> </u>		160.5			151.8			162.5				
1. POINTS GAINED     2.8     1.9       1. POINTS GAINED      163·3     153·7     162·5         3rd Prize     Highly Commended.     Reserve.	TOTAL POINTS GAINED FOR MD	4		160.5			151.8						125.5	
L, POINTS GAINED 163·3 153·7 162·5 3rd Prize. Highly Commended. Reserve.	Foints for time since Calving	l		.5 8.7			1.9			l			1	
3rd Prize. Highly Commended. Reserve.	TOTAL, POINTS GAINED	اــا		163.3			153-7			162.5				
	:		ଦେ	rd Prize		High	ly Comm	ended.		Reserve.		IInghi	ly Comme	nded.

sr, 1923)—Continued.															
s ro Isr Augus	185 Iken Lady Graceful.	Jan. 27, 1922. 1,368 Sept. 21	Morn. Even. 35.8 40.8 87.6 40.4	73.4 81.2	36 7 40 6	8 76 4 27 8 88 8 99 19·64 13·26 1 38 1 73	27.6 346	3.25 3.65	13 0 14 60	77 3 62-2 27-6	167.1	167.1		167.1	2nd Prize.
I, AND PREVIOUS	183 Reddown Crocus 3rd.	Aug. 14, 1921. 1,442 Sept. 13.	Aft. 15ven. 27 5 28 2 3 29 1 27 7 8	56.6 55.9 7	28 3 27.95 3	2.68 3 22 8.32 8.40 1	0		1	111	11	1	1		Disqualıfied,
TUST, 195			Morn. 28·3 29·4	57.7	28.85	8.33	-	l.	1			м			
-BRITISH FRIESIAN COWS (BORN AFTER 1ST AUGUST, 1921, AND PREVIOUS TO 1ST AUGUST, 1928)-Continued.	Number	Born 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Weight of Milk, 1st day Weight of Milk, 2nd day	Total	Average	Percentage Fat Composition of Solids other than Fat the Milk. Trotal Solids Actual weight of Fat, in 1bs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs	Calculation of Points multiply by 4	For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving .	TOTAL, POINTS GAINED	Remarks and Awards

CLASS 10-BRITISH FRIESIAN HEIFERS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK.

			Even. 24·1 23·9	48 0	24.0	3.55 8 39 11.94 0.85	17.0	2 01	8 04						
	191 Hamels Foliage.	Aug. 20, 1923. 1,285 Aug. 13. 66	Aft. E 22 2 2 2 2 3 8 2 2	46 0 4	23 00 2	3 45 8·33 11·78 0 79	15 8 I	1 92	7 68	70 25 48·6 23·64	142.5 20.0	122 5	2.6	125.1	2nd Prize.
	Han	Au	Morn. 22 8 23·7	46 5	23.25	3 41 8·53 11·94 0·79	15 8	1.98	7 92						61
	3rd.	24.	Even. 16·7 16 7	33.4	16.7	3.83 9.05 12.88 0.64	12 8	1 51	6.04						nded.
	190 Golf Sunshme 3rd.	May 25, 1924. 1,284 Aug. 26. 53	Aft. 17 0 17 2	34.2	17.1	3.51 9.01 12.52 0.60	12 0	1.54	6.16	50 · 55 35 · 0 18 16	103 7	103 7	1.3	105.0	Highly Commended.
23).	Golf	M	Morn. 16.3 17.2	33.5	16.75	3.05 8 85 11.90 0.51	10.2	1.49	5.96						High
1sr Augusr, 1923).	e Ida.	123.	Even. 12·1 12·4	24.5	12.25	3·74 9·04 12·78 0·46	9.5	1.11	4.44						nded.
sr Aug	189 Glyndebourne Ida,	Sept. 14, 1923. 1,396 Aug. 24. 55	Aft. 13 5 11·9	25 4	12.7	4.07 8.35 12.95 0.52	10 4	1.12	4 48	37 · 15 28 · 2 13 · 20	78.6	78.6	1.5	80.1	Highly Commended.
OR AFTER 1	Gly	Š	Morn. 12·7 11·7	24.4	12.2	8.77 12.82 0.43	8 6	1.07	4 28				_		Highly
ON OR	187 Beverley Warnor's Jem.	April 16, 1924. 1,365 Sept. 17. 31	Even. 16·9 17·5	34 4	17.2	4.06 9.70 13.76 0.70	14.0	1.67	6 68	34.25 27.2 12.96	74.4	73.4		+	Highly Commended,
Born		April 1, Sep	Morn. 16·2 17·9	34.1	17.05	3.88 9.20 13.08 0.66	13.2	1.57	6.28			77	!!	74.4	Higi
	::	::::	; ;	:	;	::::	:	ps.	:	::- *	: :	MILE	:	:	:
	: :	::::	1:	:	÷	::::	:	t, in 1	:	::: (Ibs.	: :	FUR	dving	NED	:
	::	::::	::	:	:	nan Fa	y 20	an Fa	y 4	.: n Fat	Milk 	AINEL	nce C	GAI	:
ì	::	::::	: :	Fe Te	Average	iner ti lids 18.	iply b	her th	iply b	et tha	ts for	NTS G	ime si	INTS	:
	:	::':	day day	Total	Ave	Fat Solids other than Fat Total Solids Fat, in lbs	s mult	lids of	s mult	(lbs.) ds oth	Total Points for Milk Deductions	TUIN POINTS GAINED FUR MILK	Points for time since Calving	TOTAL POINTS GAINED	
,		i lbs. .: ving	s, 1st s, 2nd				Point	of So	Point	of Mills	Tota Ded	Tura	Point	TOT.	wards
		ght, n ved . ce Cal	of Mills			ntage tion o. fülk. reight	jo uo	veight	jo uo	eight e eight e eight c					and A
	Number Name	Born i.i.e. Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat Composition of Soluds othin the Milk. Total Solid Actual weight of Fat, in 1bs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in 1bs.	Calculation of Points multiply by	Ponts— For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. ×				3	Remarks and Awards
	1									1					

OLASS 10.—BRITISH FRIESIAN HEIFERS (BORN ON OR AFTER 18T AUGUST, 1923)Continued.   Number	ESIAN E	HEIFERS 192 Ilamels Grace.	S (BORN	T ON OR AFF 193 Hamels Flashlight.	OR AFTER 193 Hamels Jashlught	Ist At	f August, 1923) 196 Wmchester Mfriam.	1923)(	ontinue Atti	nued. 197 Attimose Angela	
Born Live weight, in 11s. Last Calved Days since Calving	, ,	Feb. 20, 1924. 1,359, Sept 2,		Aug. 14, 1923. 1,426 April 3 198	14, 1923. ,426 pril 3 198	Se	Sept 25, 1923 1,304 Sept 27.	200	Se	Sept. 4, 1923. 1,315 Sept. 25. 23	3.5
Weight of Milk, 1st day	Morn. 16 2 17.7	Aft. 18·0 17·8	Even. 18 7 17·3	Morn. 17 7 19·5	Even. 18 8 18 4	Morn, 13 9 13·1	Aft. 14·4 13 7	Even 13.7 15 0	Morn 6 3 8 1	Aft 9 7 8 3	Even 7.6 9.7
Total	33 9	35.8	36.0	37.2	37.2	97.0	28 1	28.7	14.7	18 0	17.3
Average	16.95	17.9	18.0	18 6	18.6	13 5	14 05	14 35	7.35	0 6	8 65
Percentage Fat Composition of Solids other than Fat Trotal Solids of Solids Actual Weight of Fat, in 1bs.	# 03 9 17 13·20 0·68	3 93 9.25 13.18 0.70	4 32, 9 18 13 50 0 78	4 00 8 65 12 64 0 · 74	3 77 8 65 12 42 0 70	8 92 8 92 12 43 0 :47	3.97 8.81 12.78 0.56	4.19 8.57 12.76 0.60	4 04 9 50 13 54 0 30	4 62 8 82 13·44 0 42	4 33 9·29 13·62 0·37
Calculation of Points multiply by 20	13.6	14 0	15.6	14 8	14 0	9.4	11.2	12 0	0 9	8.4	-1
Actual weight of Solids other than Fat, in Ilis.	1.55	1 66	1 66	1 61	1.61	1.2	1 24	1 23	0 70	08 0	08 0
Calculation of Points multiply by 4	6.3	<del>7</del> 9 9	. 6 64	6 44	6 44	4 8	4 96	4 92	8 2	3 23	10
eight of Milk (lbs) eight of Fat (lbs, $\times$ 20) sight of Solids other than Fat (lbs, $\times$ 4)		52.85 43.2 19.48		37 28 12	37 2 28 8 12 88		41 90 32 6 14 68			25.00 21.8 9.2	
Total Points for Milk Deductions	 	115.5		82	6		89.3			26 0	
TOTAL POINTS GAINED FOR MILK	Ħ	115 5		82	6.82		89 2			99	
Points for time since Calving .	·	9.0		12	12.0		1			l	
TOTAL POINTS GAINED .	l	116.1		06	6		89 2			96.0	
Remarks and Awards	:	3rd Prize.		Hig	Highly Commended.	Hıghl	Highly Commended.	ended.			

	ea.		٠		22	9846	80	78	9						
	s Galate	24.	Even. 20 9 20 0	40.9	20.45	3 36 8 98 12 34 0 · 69	13 8(	1.8	7.36						
tinued.	201 Knebworth Ceres Galatea.	Jan. 13, 1924. 1,199 Sept. 8. 40	Aft. 21 · 5 19 · 2	40.7	20 35	3 01 9·19 12 20 0·61	19.9	1.87	8  2	62 25 42 4 22 73	127.4	127.4	1	127.4	1st Prize.
3)—Con	Кперис	<u>ii</u>	Morn. 21 9 21 0	42.9	21 45	3 81 9 21 13 02 0 ·82	16.4	1.97	7 88						
зт, 192	200 Iken Ceres Daitymaid.	Nov. 29, 1923. 1,494 July 1. 109	Even 18·3 18·9	37.2	18.6	2 96 8 48				111				ı	Disqualtfied.
T AUGU	Iken Dairy	Nov. 2 1,: Jul	Morn. 19·0 17·7	26 7	18 35	3.2 <del>4</del> 8 08 —		I							Disqu
CLASS 10.—BRITISH FRIESIAN HEIFERS (BORN ON OR AFTER IST AUGUST, 1923)—Continued.	daw.	. 23.	Even. 15·5 13·6	29.1	14.55	8.53 12.28 0.545	10.9	1.24	4.96						
N OR A	199 Macknade Vendaw.	Sept. 13, 1923. 1,443 Sept. 28. 20	Aft. 13 2 14·0.	27.2	13 6	8.90 11.32 0.33	9 9	1.21	4 84	41 05 26·2 14 48	81.7 10.0	7.1.7	1	71.7	
BORN C	Mack	ૹઁ	Morn. 11.9 13 9	25 8	12 9	3 37 9.09 12.46 0.435	8.7	1 17	4.68						
FERS (	198 Eynsford Trix.	Jan. 13, 1924. 1,290 Aug. 28. 51	Even 27.7 25.8	53 5	26.75	3 20 9 08 12 28 0 855	17.1	2.42	89 6	54.3 34.5 19.4	8 2	108 2	1.1	109.3	Reserve.
N HEI			Morn. 28·1 27·0	55.1	27 55	3.15 8 85 12.00 0 87	17.4	2 43	9 73	70.85	10				
ESIA	i .	:.!:	: 1	:	٠	: :	:	lbs	:	× **	: :	TOTAL POINTS GAINED FOR MILK	:	:	:
FRI	• •	::	: .		•	at	•	ıt, in 1	•	(1bs.	. :	D FOR	Calving	INED	:
ISH	::	·:.	. :		:	han F	y 20	ıan Fa	ış. 4	 m Fat	Milk	GALNE	since (	S GA	
BRIT	: .	٠٠.	: :	Total	Average	Fat Solids other than Fat Total Solids Fat, in Ibs.	tiply b	ther ti	tiply !	For weight of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (lbs. $\times$	Total Points for Milk Deductions	SIMI	Points for time since Calving	rotal, points gained	:
0.	. :	. : . :	day 1 day	To	Av	olids colids colids colids colids colids colids at t, in 1	ts mul	o spite	ts mul	lk (lbs t (lbs. ids ot	Fotal Points Deductions	CAL PO	nts for	rar, j	qs
ASS	:	in Ibs.  alving	IK, 1st IK, 2m			of Ast	f Poin	t of S	f Poin	of Mi	Tot	To	Poi	TO	Awar
Ç	<sub>ä</sub> :	eight, alved ince C	of M			Percentage mposition of the Milk.	rtion o	weigh	tion o	weight weight weight					ks and
	Number Name	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat Composition of Solids other the Milk. [Total Solids Actual weight of Fat, in lbs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs.	Calculation of Points multiply by 4	For For				,	Remarks and Awards
			•				-	-							, , ,

THE HEED BOOK OF THE SOUTH DEVON HERD BOOK SOCIETY). HERD BOOK OR ENTERED IN OR ELIGIBLE FOR THE REGISTER OF SUCH BOOK SOUTH BOOK).
HERD BOOK OR ENTERED IN THE SUPPL REGISTER OF SUCH HERD BOOK)
Number Name
Number Name Born Lave weight, m lbs. Last Calved
208 Milkmaid 9th.
20 Milkun
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21).															
OR PREVIOUS TO 1ST AUGUST, 1921)	235 Tendring Floss 34th,	April 5, 1919. 1,160 Aug 31. 48	Even. 37·5 31·5	0.69	34.5	4.55 8.97 13.52 1.57	31.4	3 10	12.4	68 35 55 0 24 4	147.8	147.8	8.0	148.6	lst Prize.
Isr Au	Tendri	April 1, Aug	Mora. 32.2 35 5	2 · 29	33 85	3.49 8.85 12.34 1.18	23.6	3 0	12.0	92361	14	14		14	1st
OL SO	234 Seven Springs Bessy,	Jan. 16, 1920. 1,124 June 16. 124	Even. 19·2 18 0	37.2	18.6	4.68 9.22 13.90 0.87	17.4	1.73	88.9	38.3 38.8 13.92	1 0	0	8 4	99.4	
PREVIO	Seven Be	Jan. 1, 1, Jun 1	Моги. 19·4 20·0	39.4	19.7	5.42 8.98 14.40 1.07	21.4	1.76	7.04	38.81	16	16		36	
BORN ON OR	Saham Leezie.	, 1921. 556 . 25.	Even. 25.0 24.9	49 9	24.95	3.84 9.24 13.08 0.96	19.2	2.31	9 24	49 45 38 2 18·52	106.2	01		çī	Hıghly Commended.
	Saham	Feb. 4, 1921. 1,256 Sept. 25. 23	Morn. 24.5 24.5	49.0	24.5	3.89 9.47 13.36 0.95	19.0	2 32	9.28	449 388 18	106	106	•	106.2	Hıg
в Воок.	228 Bray Queen.	, 1921. :35 : 17.	Even. 27 · 7 29 · 5	57.2	28.6	4.35 9.53 13.88 1.24	24.8	2.73	10 92	57.4 48.8 21.32	ا فر	5		.5	rize.
тив Невр	Bray (	Mar. 6, 1921. 1,835 Sept. 17.	Morn. 29.8 27.8	57.6	28.8	4.17 8.99 13.16 1.20	24.0	2.6	10.4	57 48 21	127.5	127		127	3rd Prize.
	ster.	17.	Even. 20 · 0 19 · 9	39.9	19.95	3.64 9.04 12.68 0.73	14.60	1.81	7.24						ıal, Red y's Prize.
ELIGIBLE FOR	227 Hardwick Hester.	April 7, 1917. 1,249 Sept. 9.	Aft. 19·7 20·9	40 6	20.3	3.86 9.16 13.02 0.785	15.70	1.86	7 - 44	61.05 47.1 22.40	130.6	130.6		130.6	2nd Prize; Equal, Red Poll Cattle Society's Prize.
OR			Morn. 20·1 21·5	41.6	20.8	4.03 9.23 13.26 0.84	16.8	1.93	7.72						
ED I	::	::::	::	:	:	: . : :	:	:	:	: : <del>(</del>	: :	MILK	:	:	:
NTER	: :	··:.	• :	:	:	٠:	:	dini,	:	:: (Ibs. v	. :	FOR	alving	NED	÷
S (E	::	::::	٠:	:		an Fa	y 20	ın Fat	4	 n Fat	Milk 	AINE	ince C	S GAJ	÷
COW	:.	.:::	٠:	al	Average	Fat Solids other than Fat Total Solids Fat, in lbs.	iply b	her th	iply b	 × 20) er tha	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL POINTS GAINED	:
TT	1:	::::	day day	Total	Ave	Fat. Solids oth Total Soli Fat, in Ibs.	s mult	ids of	s mult	t (lbs.) (lbs.) ds oth	Total Point Deductions	AL PO	ts for	'AL, P	, so
D PC	: :		k, 1st k, 2nd			f AR	Point	of Sol	Points	of Mill of Fat of Soli	Tota Dedi	TOL	Poin	TOT	Award
-RE		ight, in ved	of Mill of Mill			ntage tion o filk, reight	ion of	veight	ion of	eight eight eight					s and
15	Number Name	Born Live weight, in 1bs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Composition of the Milk, Actual weight of	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by	For weight of Milk (lbs.)  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. ×					Remarks and Awards
CLASS 15.—RED POLL COWS (ENTERED IN	ZZ	គីអ៊ីអ៊ីគ័				ठ ४	Ű	Ā	ď۴	4				Lys	Ř '
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Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   Number   N	Highly								12	1		1			
Hutton Apricot   Asium   15.   Hutton Apricot   Asium   15.   Hutton Apricot   Asium   15.   Hutton Apricot   Asium   15.   Hutton Apricot   Asium   15.   Hutton Apricot   Asium   15.   Hutton Apricot   Asium   15.   Hutton Apricot   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   Asium   As						44·45 37 9 15 44		1	1	1		43.5		15, 1919, 1,210 tug. 4.	237 101e Vioka
than Fat by 20 than Fat, in lhs. by 4 an Fat (lbs. × 4 at Milk Gained Pay TS Gained							7.8	9	11.9	# 36	38.55	45 7	M 918 Tress	Mar.	Ashn
than Fat by 20 than Fat, in 11s. by 4 r Milk canyed calving TS GAINED	Reserve	0 1	0 3	5.8	5 8	9 5 8 0 8 28		1 31	14.52	5.38	24.35	48.7	Even 24·0 24·7	11, 1919 301 pt. 5,	336 Apricot
than Fat by 20 than Fat, in 11s. by 4 r Milk canyed calving TS GAINED	Re	11		11	11	444	9.4	2 35	13.68	4 34	25.15	50.3	Morn 27 1 23 · 2	Sept.	Hulton
Number  Born  Lave weight,  Lave weight,  Days since Calved  Weight of Milk,  Weight of Milk,  Weight of Milk,  Actual weight of  Actual weight of  Calculation of P  Actual weight of  Pourts—  Poweight of  For weight of  For weight of  For weight of  For weight of	Remarks and Awards	TOTAL POINTS GAINED .	Points for time since Calving .	TOTAL POINTS GAINED FOR MILE	٠.	For weight of Mark (lbs.) For weight of Fat (lbs. $\times$ 20)	Calculation of Points multiply by 4	Actual weight of Solids other than Fat, in Ibs		_	Average	:	Weight of Milk, 1st day Weight of Milk, 2nd day	, m lbs. Jalving	: :

CLASS 16.—RED POLL COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK.

						ಯ ಕಿಪ್ ಕಾ r∽	0	#	9.2		1 11/1				
	e 2nd	922.	Even 14 6 15 4	30 0	15 0	3·13 9 63 12·76 0 47	9 40	1.4	5 7						a:
	241 Hulton Belle 2nd	Sept 9, 1922. 1,055 Sept 8. 40	Aft. 17·1 16 5	33 6	16 8	3 11 9·65 12·76 0 52	10 4	1 62	6 48	47.65 30.2 18 56	96 4	₹-96	1	96 4	Reserve.
	Hu	æ.	Morn. 15.2 16.5	31.7	15.85	3.26 9.94 13.20 0.52	10 4	1.58	6 32						agenda for a second of the programmer.
23).	ltine.	21.	Even. 19 3 18 8	38 1	19.05	3.40 9 10 12 50 0 65	13 00	1.73	6.95						
usr, 19	240. Southdown Beltine.	Sept. 25, 1921. 1,228 Aug 19 60	Aft. 20 0 20 0	40.0	20 0	3 46 9 14 12 60 0 69	13.8	1 83	7.35	58 70 40 4 21 68	120 8	120 8	0.5	122 8	lst Prize
sr Aug	South	Sel	Morn. 19 1 20 2	39 3	19.65	3 45 9 51 12 96 0 68	13 6	1.86	7.44						
rs To 1	e 4th	l.	Even 13·0 12 4	25 4	12.7	4 46 8 70 13 16 0.57	11 40	11.11	4.44						d, Red
PREVIO	239 Knepp Prudence 4th	Sept 6, 1921. 1,296 May 26. 145	Aft. 12 6 13·7	26.3	13.15	4 56 8 90 13 46 0 60	12.0	1.17	4.68	38 95 35 4 13 88	88	88 5	10.5	2 86	3rd Prize; Equal, Red Poll Cattle Society's Prize.
l, And	Knepl	Seg	Morn 13 1 13 1	26 2	13.1	4 61 9 05 13 66 0 60	12.0	1 18	4 76						3rd Priz Poll Catt
Born after 1st August, 1921, and previous to 1st August, 1923)	238 Basildon Rosebud 2nd	1922 10 28.	Even 22.7 22.5	45 2	9 55	2 83 9 03 11 86 0 645	12.9	5 04	8.16	45 45 33 7 16·56	95.7	1-		1-	hly ended.
sr Aug	25 Basi Roseb	Oct. 2, 1922 1,110 Sept. 28.	Morn. 23·0 22·7	45.7	22 85	4.53 9 15 13 68 1 04	20.8	2 10	₹.8	45 33 16	95	.85		85	Highly Commended.
ER 18	• •	: .	,	learn.			:			· : <del>(</del>	: .	MILK		-	:
AFT	• :	:	. •		:			t, in 1	÷	(1bs.	÷	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	NEL	•
BORN		::: ·	:			an Fa	. 50	зи Fa	. 4	n Fat	Milk	AINEL	ince C	S GAJ	
	: ·	<b>:</b> . ·	· :	77	Average	Frat Solids other than Fat Total Solids Total Solids Fat, in lbs.	rd ylq	ner th	ply by	 ( 20) er tha	Total Points for Milk Deductions	NTS G	lime s	TOTAL, POINTS GAINEL	:
	::		day	Total	Ave	t lids of tal So in lb	multi	ds oth	multi	(1bs. ) (1bs. ) Is oth	Total Point Deductions	r Por	s for	4I, P(	
		lbs.	, 1st d			Solv Tota	Points	of Soli	Points	f Fat f Solid	Total Dedu	Tora	Point	TOL	wards
		ht, in ed e Caly	í Mik í Mik			tage ion of ilk.	n of ]	eight (	n of ]	ight c ight o ight o					and A
	Number Name	Born Lave weight, in Ibs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat Composition of Solids other the Milk. Total Solid Actual weight of Fat, m lbs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by	round. For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × ±					Remarks and Awards

1 1 1 1 1 1															
	241 Saham Ruby Vintage.	Oct. 8, 1921. 1,360 Aug. 23, 56	Even. 20·7 18·2	38.0	19 45	8 77 13 02 0 83	16.6	1.71	6.84	36 4 29.0 12.92	78 3	78 3	1 6	79.9	
	Sahar Vm	Oct. 3	Morn. 15·4 18·5	33 0	16 95	8.67 8.95 12.62 0.62	12.4	1.52	80.9	801-	2	2		7	
	3 don iorn.	, 1922. 60 11.	Even. 21 · 9 19 7	41.6	8.02	5 22 9 76 14 98 1 09	21 8	5.04	8.16	& <del>1</del> 61 81	0	0	8	8.	:, Equal II Cattle 5 Prize.
	243 Basıldon Hawthorn.	Sept. 11, 1922. 1,160 Aug 11. 68	Morn. 23·3 19 7	43.0	21 5	5.04 9.48 14.52 1.08	21.6	2 03	8.12	42 43 16	102 0	102	61	104.8	2nd Prize, Equal Red Poll Cattle Society's Prize,
	II	: :	· . :	<u></u>	:	<u> </u>	:			· :4	:	MILK	•	:	:
	::	::::	ŧ		፥	: :.	•	u m	:	:: (1bs. ×	: .	FOR	alvıng	NED	÷
	1:	.:::	. :	:		Fat Solids other than Fat Total Solids	y 20	han Fat	y 4	 ıan Fat	r Mulk	TOTAL POINTS GAINFD FOR MILK	Points for time since Calving	TOTAL POINTS GAINED	
The same of the same of	. :	: ::	٠:	Total	Average	Fat Solids other 1 Total Solids fat, in lbs.	ıltiply 1	other t	ıltiply 1	os.) t. × 20) other ti	Total Points for Milk Deductions	OINTS	or time	POIN	÷
-	: :	. : .	st day nd day	Ţ	¥	Fat Solids Total at, in	nts mo	Solids	ուն ոռո	filk (II) at (Ibs olids o	Total Pomt Deductions	TAL F	ints fo	TAL	rds
	::	hi II.	filk, 1s filk, 2s			<u>ٿ</u>	of Poi	ht of	of Por	ht of H it of H it of S	ÄÄ	ŭ	ŭ	77	d Awa
	Number Name	Born Lave weight, in Ils Last Calved Days since Calving .	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage (Pat Composition of Solids othe the Milk, [Total Solic Actual weight of Fat, in lbs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, m $1\!\mathrm{ls.}$	Calculation of Points multiply by 4 Points—	For Weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat					Remarks and Awards
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CLASS 17.—RED POLL HEIFERS (ENTERED IN	NTERED	OR	Eligible for the Herd	E FOR 1	нв Нв	вр Воок.		BORN ON	OR AFTE	R IST A	AFTER 1ST AUGUST, 1923).	1923).
Number Name		245 Longford Desperation.	ration.	Long	247 Longford Courage,	rage.	Bas	248 Basildon Moelen.	len.	Bast	251 Basıldon Russett,	ett.
Born in lbs lave weight, in lbs		Mar. 2, 1924. 1,151 Sept. 5.	24.	Ö	Oct. 2, 1923. 988 Sept 22. 26	6	Š	Sept. 28, 1923. 1,136 Aug. 30.	23.	Se	Sept. 9, 1923. 918 June 6. 134	
Weight of Milk, 1st day Weight of Milk, 2nd day	Morm. 14·4 14·0	Aft. 14·3 14·2	Even. 14·6 12·8	Morn. 17 5 16·6	Aft. 17.8 17.2	Even. 17·4 16·4	Morn. 13.9 10.4	Aft. 10·8 11·2	Even. 9 8 11·7	Morn. 14·0 12·1	Aft. 13·7 13 8	Even. 12·9 12 8
Total	28.4	28.5	27.4	34 1	35 0	33.8	24.3	22.0	21.5	26 1	27 5	25.7
Average	14.2	14 25	13.7	17.05	17.5	16 9	12 15	11 0	10.75	13.05	13.75	12.85
Percentage Fat Composition of Solids other than Fat	3.82 9.10 12.92 0 545	4 15 9.07 13.22 0.59	4.0 8.88 12.88 0.55	3 08 9 08 12·16 0 525	3.31 8.95 12.26 0.58	3.61 8 81 12.42 0.61	3.50 9.84 13.34 0.425	3 80 9 62 13 42 0 42	3.35 9.49 12.84 0.36	4.54 $9.42$ $13.96$ $0.595$	5 20 9 26 14·46 0·715	4 67 9 25 13 92 0 60
Calculation of Points multiply by 20	10.9	11.8	11.0	10.5	11 6	12.20	8.5	8 4	7.20	11.9	14.3	12.0
Actual weight of Solids other than Fat, in 1bs	1.29	1.29	1.22	1.55	1.57	1.49	1.2	1 06	1.02	1 23	1.27	1.19
Calculation of Points multiply by 4	5.16	5 16	4.88	6.20	6.28	5.96	4.8	4 24	4.08	4.92	5 08	4.76
Fours—Fours—For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)		42.15 33.7 15.20			51 45 34·3 18 44			33.90 24.1 13.12			39 65 38·2 14 76	
Total Ponts for Milk Deductions		91.1			104 2			71.1			92.6	
TOTAL POINTS GAINED FOR MILK		91 1			104.2			71.1			95.6	
Points for time since Calving		0.3						6.0			9.4	
TOTAL POINTS GAINED	·	91.4		,	104.2			72 0			102.0	
Remarks and Awards		Highly Commended,	nded.		lst Prize.	_	High	Highly Commended.	nded.		3rd Prize.	
	-		•								The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa	

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4.	260 Grauntcourts Tenderness.	July 14, 1924. 996 Aug. 27. 52	Even. 15 0 14·5	20.5	14.75	3.79 9.35 13.14 0.56	11.2	1 38	5.52	20.85 22.2 11.08	63.1	63 1	1.2	64.3	
ontine	Graun Tend	July 14, 19 996 Aug. 27. 52	Morn. 15·1 15·1	30.2	15-1	3·64 9·20 12·84 0·55	11.0	1.39	5.56	정하다	9	9		9	
1st August, 1923)-Continued.	258 Basildon Queenliness.	May 11, 1924. 1,001 Aug. 29. 50	Even. 23·3 24·1	47.4	23.7	3.70 9 68 13.38 0.88	17 6	2.30	9 20	47.7 36.2 18.16	Ξ.	102.1	1.0	103.1	2nd Prize.
aust, 1	Basi Queer	May 11, 11, 11, 12, 13, 14, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15	Morn. 24·0 24·0	48 0	24.0	3 85 9·31 13·16 0·93	18.6	2.24	8.96	86 18	102.1	102		108	2nd
IST AUG	255 Glevering Redstart.	m. 19, 1924. 1,278 Sept. 20. 28	Even. 13·1 14·5	9.72	13.8	5.09 9.05 14.14 0.70	14.0	1 25	5.00	28.05 26 0 10.12	64.2	2		64.2	
OR AFTER ]	Sleve Reds	Jan. 19, 1924. 1,278 Sept. 20. 28	Morn, 16·6 11·9	28 5	14.25	4·19 8 99 13·18 0·60	12.0	1 28	5 12	8880	64	64		64	
ON OR	88.	7.	Even. 16·0 16·4	33.4	16.2	3·71 8 53 12·24 0·60	12.0	1 38	5 52						oll Cattle ize.
(Воки с	254 Lydiate Lass.	Feb. 22, 1924. 1,132 Aug. 30.	Aft 16.2 16.3	32.5	16.25	3.03 9.17 12.20 0.49	8.6	1.49	5.96	47·90 32·1 16·76	8.96	8.96	6.0	2.79	Red Po
POLL HEIFERS (	I,3	F	Morn. 15·4 15·5	30.9	15.45	3 34 8·54 11·88 0·515	10.30	1 · 32	5 28						Reserve, Red Poll Cattle Society's Prize,
TEI	::	::::	::	:	•	::::	:	:	:	. : <del>.</del>	: :	KILK	:	•	:
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) P(	::	:			:	an Fa	82	m Fa	7	ı. Fai	Milk	AINE	ince (	GA.	:
CLASS 17.—RED	::	1.11	::	Total	Average	Fat than Fat Solids other than Fat Total Solids Fat, in lbs	tiply by	ther th	tiply by	nuts	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	:
17.	::	::::	day day	To	Av	Fat Solids other Total Solids fat, in Ibs.	s mul	lids o	s mul	k (Ibs. (Ibs. ids of	Total Point Deductions	AL PO	its for	AI,	ug.
LASS	1 1	in lbs. iii shing	s, 1st s, 2nd			f and find the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	Point	og Jo	Point	of Mil of Fat of Sol	Tote	Tor	Poir	TOI	<b>1</b> ward
O		ght, ii red e Cal	f Mill			tage ion o ilk, eight	jo uc	eight	on of	eight ight c ight c					and 4
	Number Name	Born i Live weight, in 1bs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat Composition of Solids other the Milk. Total Solid Actual weight of Fat, in Ibs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by 4	For Weight of Milk (lbs.) For weight of Fat (lbs. × 2 For weight of Solids other					Remarks and Awards
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CLASS 18.

	268 Mount Sweetheart.	1918. 1,558 Sept. 11	Even. 31 · 7 29 · 6	613	30 65	8 61 8 61 12 22 1 11	51 52	3 66	10 64	59 0 41.6 19 84	9.4	110.4	0.4	110.8	3rd Prize
	Mc Swee	19 1,1	Morn. 29 9 26 8	2 99	28 35	$\begin{array}{c} 3 & 41 \\ 8.09 \\ 11.50 \\ 0 & 97 \end{array}$	19∙4	63 63	9.50	20 <del>4</del> 11	120	110	)	11(	3rd
DOOR).	267 Megdale Emma	Not known. 1,332 Sept. 8. 40	Even. 24 9 26 0	50.0	25.45	4.70 9.10 13.80 1 20	24 0	2 82	9 28	51.05 47.2 18.36	9 9	3 6		116.6	2nd Prize.
S II EKU	Meg Ehn	Not 1,	Morn, 24 6 26 6	51 2	25 6	4 53 8.85 13.38 1.16	53.5	2 27	80 6	13.4.1.	116	116		11(	2nd
CLASS 18.—BLUE ALBION COWS (ENTERED IN OR ELIGIBLE FOR THE HERD DOOK)	266 Brampton Jewel	Not known. 1,189 Oct. 1.	Even. 25·1 27 2	52.3	26.15	4·31 8·43 12·74 1·13	22 6	2.20	8.80	53·45 47·4 18·6	119.5 10 0	109.5		109.5	Reserve.
IGIBLE	Bran Jev	Not k 1,1 Oct	Morn. 27 · 1 27 · 5	54.6	27 8	4.55 8 95 13 50 1 24	24 8	2 45	9.80	58 47 18	118	108		108	Res
N OR EI	264 Elsenham Jesste,	1919. 1,422 Sept. 1.	Eyven. 40·6 36 6	77.2	38.6	3.78 9.04 12.82 1.46	20 2	3.49	13 96	76.1 53 0 26.96	н,	1	1	æ	rıze
ERED I	Elsen Jes	191 1,4 Sepl	Morn. 37.8 37.2	75.0	37.5	3.17 8.67 11 84 1 19	23.8	3 25	13.00	7.6 5.3 5.3 5.0 5.0	156 1	156	0	156	1st Prize
VX (ENT	261 Bramshall Margaret	Not known, 1,442 June 21. 119	Even. 29 1 27·6	2.99	28 35	3.39 8 97 12 36 0.96	19 2	2 54	10.16	55 35 34.0 19 6	0.0	0.66	6	6.	
ON COA	261 Bramshal Margaret	Not k 1,4 June 11	Morn. 25.8 28.2	54 0	27 0	2.75 8 79 11 54 0 74	14.8	2 36	9 44	25 34 19	109.0	66	7	106.9	
ALBI(			:	•			:	Ibs .	:		i	TOTAL POINTS GAINED FOR MILK	ıg		
LUE E		1111			:	Fat	:	at, in	•	at (Ibs	: .	ED FO	Points for tame since Calving	TOTAL, POINTS GAINED	:
3.—B		<b>! !</b> .	:	:		than	by 20	than I	, by 4	0) :: han F:	Total Points for Milk Deductions	s GAIN	e since	NTS G	į
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	Number Name	Born I.ive weight, in lbs. I.ast Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Fat Composition of Solids other than Fat the Milk   Total Solids Actual weight of Fat, in Ibs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs	Calculation of Points multiply by	For weight of Milk (lbs.) Froweight of Fat (lbs. × 20) For weight of Folids other than Fat (lbs. ×					Remarks and Awards
	Nun	Born Live v Last C Days	Wei			Com t Actu	Calc	Actı	Calc	ž Eŭŭŭ					Ren

	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Morn.         Eyen.         Morn.         Eyen.         Morn.         Eyen.            16·3         16·6         14·8         16·5         15·1         13·3            14·7         15·9         16·4         16·3         13·8         13·8	32 5 31 2 32 8 28 9	15.5 16.25 15 6 16.4 14.45 13.55	3.88     4.13     4.68     4.52     4.11     4.00        8.78     8.61     9.24     9.24     9.40        12.16     12.74     14.00     13.62     14.30        0.525     0.67     0.73     0.74     0.59	10 50 13.4 14.6 14.8 11.8 13.2	in lbs 1 · 36 1 · 40 1 · 46 1 51 1 · 36 1 27	5.44 5.60 5.84 6.04 5.44 5.08	23.9 29.4 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0	66.7 73.8 63.5	OR MILK 66 7 78 3 63 5	wing	ED 66·7 73·3 63·5	9nd Prize 1st Prize
Number Number	Born	Weight of Milk, 1st day Weight of Milk, 2nd day	Total	Average	Percentage Frat Composition of Solids other than Fat . the Milk. (Total Solids Actual weight of Fat, in 1bs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs	Calculation of Points multiply by 4	For weight of Milk (lbs ) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	Total Ponus for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	Remarks and Awards

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275 Bryncian Handy 6th.	Dec. 4, 1921. 1,124 Sept. 5. 43	Morn. Even. 20 5 23·7 24 7 19·8	45.2 43.5	22.6 21.75	3 46 3·92 9·46 9·42 12·92 13 34 0·78 0·85	15.6 17.0	2.13 2.05	8.52 8 20	44.35 32.6 16.72	7-86	93.7	0.3	0.40	1st Prize.
274 Gwern Clementine.	Feb. 28, 1922. 1,167 Aug. 17. 62	Morn, Aft Even. 12.5 12 0 12.0 18.1 13 1 13.3	25.6 25.1 25.8	12.8 12.55 12.65	4 · 55     4 · 40     4 · 22       9 · 45     9 · 40     9 · 34       14 · 00     13 · 80     13 · 56       0 · 58     0 · 55     0 · 535	11.6 11.0 10.70	1.21 1.18 1.18	4.84 4.72 4.72	38·00 33·3 14·28	85.6	85 6	2.2	87.8	
Number Name	Born i.v. i.v. i.v. i.v. i.v. i.v. i.v	Weight of Milk, 1st day Weight of Milk, 2nd day	Total	Average	Percentage (Fat Composition of Solids other than Fat the Milk. Total Soluds Actual weight of Fat, in Ibs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs	Calculation of Points multiply by 4	For weight of Malk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving .	TOTAL POINTS GAINED	Remarks and Awards

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Number	Ça	276 Catlinus Belinda,	inda.	Corsehil	278 1 Clement	278 Corsehill Clementine 2nd.	Millar	279 Millantae Mayflower	lower	Shi	280 yeqo'l Hopey	y-y-
Born Live weight, in 1bs Last Calved		April 28, 1921. 1,166 Sept. 26.	. 120	At	Aug. 20, 1922. 1,056 Sept. 9.	31	K	April 3, 1911. 1,238 Ang 28. 51	-	ĭ	Feb. 19, 1916. 1,160 Ang. 20. 59	. 10.
Weight of Milk, 1st day	Morn. 24·8 23·5	Aft. 25·4 24·6	Even. 23·2 24·1	Morn. 17·1 16 2	Aft 16.7 16.2	Even. 16.0 16.8	Morn. 30·7 29·3	Aft. 28 7 26 8	Even. 29 6 25·7	Morn. 21 · 5 23 2	Aft 21.3 21.3	Even 21 1 20 9
Total	48.3	50 0	47.3	33.3	32 9	32.8	0.09	55.5	55.3	44.7	43 1	43 O
Average	24.15	25 0	23.65	16.65	16 45	16 4	30 0	27 75	27.65	22 35	21.56	21 0
Percentage (Fat Composition of Solids other than Fat the Milk. Total Solids Actual weight of Fat, in 1bs	$\begin{array}{c} 3.76 \\ 9.14 \\ 12.90 \\ 0.91 \end{array}$	$^{4}_{9}$ 80 30 14.10 1.20	4 10 9 18 13 28 0 97	3.28 9.38 12.66 0.545	3 51 9 47 12 98 0 58	5 91 9 79 15 70 0 97	3.19 8.77 11 96 0.96	3 40 8 84 12.24 0.945	3 · 59 8 53 12 · 12 0 · 99	4 22 9 00 13 22 0 945	13.24 0.96	3 86 3 86 12 48 0 81
Calculation of Points multiply by 20	18.2	24.0	19.40	10.9	11.6	19.40	19.2	18 9	19 80	18.9	51	16.30
Actual weight of Solids other than Fat, in lbs	2.21	2.32	2.17	1.56	1 56	1.60	2 63	2 <del>4</del> 5	2 36	2 01	1.90	1.81
Calculation of Points multiply by 4 Points—	8 84	9 28	89.8	6 24	6 24	6 40	10.52	9 80	9 44	8.04	7 60	7.24
For weight of Milk (lbs.) For weight of Tat (lbs. $\times$ 20) For weight of Solds other than Fat (lbs. $\times$ 4)		72.80 61.6 26.80			49 50 41 9 18 88			85 40 57 9 29 76			64 90 51 3 29 88	
Total Points for Milk Deductions		161 3			110 3			173.1			142 1	
TOTAL POINTS GAINED FOR MILK		161.2			110 3			173 1			142 1	
Points for time since Calving .		1			1			1:1			1.9	-
TOTAL POINTS GAINED .		161.2			110.3			174.2			144.0	
Remarks and Awards		3rd Prize.		Hig	Highly Commended.		1st Priz Cup;	1st Prize, National Milk Cup; Rowallan Cup	al Milk 1 Cup	Hıghl	Highly Commended.	nded.

CLASS 21.—AYRSHIRE COWS.—Continued.

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1	untie.	920.	Even 18·1 20·7	88 x	19.4	5.63	14.86	21.80	1.79	7.16	210					Highly Commended. Mond Prize.
1	293 Byrcholm Buntie.	Dec. 10, 1920 1,060 Sept. 20 28	Aft 17.7 19 3	37.0	18.5	6 69 8 95		24.8	1.66	6.64	56 7 66 00 20 76	143 5	143.5	١	143.5	ly Comn fond Pr
	Byrc	Ъ	Morn. 18·8 18·8	37 6	18 8	51.0	14 42 0 ·97	Ŧ 61	1.74	96 9						High
5	flower.	30.	Even. 20 4 19-3	39 7	10.85	4.58 8.08	13.56 0.91	18.20	1.78	7 12						ended.
	292 Maqueston Mayilower.	Oct. 28, 1920 1,181 Sept. 25. 23	Aft 20:5 19:1	39 6	19 8	4 69 0 05	13 74 0 93	18.6	1.79	7.16	61.00 56.6 22 12	139 7	139.7	I	139.7	Highly Commended, Mond Prize,
7.	Maque	Ŏ	Morn. 22 0 20 7	12.7	21.35	4 65	13 82 0 · 99	19 8	1.96	7.84						High
ontinue	roud	1.	Even. 20·7 21·3	45.0	0. اع	5 59	15 02 1.17	23 40	1.98	7.92						nded al Milk
WS_C	290 Cargen Holm Proud Lady 8th.	Feb. 3, 1921. 1,103 Oct. 3, 15	Aft 20 7 21 · 2	41 0	20 95	25 25		23 6	2.04	8.16	62.45 66 5 24 00	153 0	153.0	I	153.0	Highly Commended Reserve, National Milk Cup.
IRE CO	Carge 1	Ä	Morn. 20 5 20 5	41.0	20 5	4.75	14.44 0.975	19.5	1.98	7.92						Highl
CLASS 21.—AYRSHIRE COWS. Continued.	ad i.	21	Even. 20 4 16·6	37.0	18.5	5 04	13 64 0 · 93	18.60	1.59	6.36						nded.
s 21.—	289 Friendlesshead Farmer 7th.	April 5, 1922. 1,150 June 24. 116	Aft. 17·0 19·8	86.8	18 4	4.52	13.46 0.83	16.6	1.65	09.9	55.6 49.6 19.44	124 6	124.6	9.7	132.2	Highly Commended.
CLAS	Pr F	Ä	Morn. 20·0 17·4	37 4	18 7	3 87	12.54 0.72	14.4	1.62	6.48						Highl
1	::	• : :			:	:	: : -	•	:	:	. : <del>.</del>	1 :	MILK	:	:	:
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	::	: :	<b>:</b> :	a Te	Average	:	Solids other than rat Total Solids Fat, in Ibs.	iply hy	her th	iply by	ints covereight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. ×	Total Points for Milk Deductions	Total Points Gained for Milk	Points for time since Calving	TOTAL, POINTS GAINED	:
	; :	. ; ;	day day	Total	Ave	7	olids of stat So t, in It	s mult	lids of	s mult	t (lbs.) ds oth	Total Point Deductions	ar Po	ts for	AL, P	w
	::	n lbs. Iving	k, 1st k, 2nd				Par Far	Points	og yo	Point	of Mill of Fat of Soli	Tota Dedi	TOL	Poin	TOT	Award
	, ;	ight, i lved nce Ca	of Mil of Mil			Percentage	mposition o the Milk. tual weight	ion of	weight	ion of	oints————————————————————————————————————					s and .
:	Number Name	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Perce	Composition of Solids office the Milk, Total Solid Actual weight of Fat, in 1bs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs.	Calculation of Points multiply by	Points— For we For we For we					Remarks and Awards

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296 Straith Gowan 12th	Feb. 25, 1919. 1,277 Aug. 20. 59	Aft. Even. 20.8 17.0 19 0 18.0	89.8 85.9	9 17.95	3.97 4 62 9 21 9 14 13.18 13.76 0.79 0 83	15.8 16.60	1.83 1.64	7.32 6.56	57 85 47.0 21.16	126 0	0 971	1.9	127 9	Highly Commended.
Straith G	Feb. 2 1, Au	Morn. Aft. 20·0 20·8 20·0 19 0	40.0 39	20.0	3 67 8 9 09 9 12 76 13 0 73 0	14 6 15	1.82 1	7.28 7	10.43	121	191		12	Highly Co
294 Byrcholm Diamond,	Feb. 14, 1923. 1,004 Sept. 18. 30	Aft Even. 18·0 17·8 17 6 18·2	35.6 36.0	17 8 18.0	1 71 1 85 9 23 9·33 13·94 14·18 0·84 0·87	16.8 17.4	1.64 1.68	6.56 6 72	53 75 47 4 20 · 00	121.2	121 2		121.2	Highly Commended,
Byre		Morn. 18 5 17·4	35.9	17.95	3 69 9 37 13 06 0 66	13.2	1 68	6.72						
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Number Name	Born Live weight, milbs Last Calved Days since Calving	Weight of Milk, 1st day	Total	Average	Percentage Fat Composition of Solids other than Fat Thotal Solids Actual weight of Fat, m lbs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, m lbs	Calculation of Points multiply by 4	ight of Milk (lbs.) ight of Fat (lbs. × 20) ight of Solids other than Fat (ll	Total Points for Milk . Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	Remarks and Awards

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NI	LIE A	IN THE APPENDICES.	ICES.	BORN	ON OR	AFTER	BORN ON OR AFTER IST AUGUST, 1923)	UST. IS	73).	:	1	-	-
Number		Ryem	299 Ryemur Clara.	į.	Ву	300 Byreholm Filiza	liza	Moo	302 Moorfield Sparkie.	ırkie.	Moorf	303 Moorfield Vanity 2nd.	y 2nd.
Born I live weight, in lbs	<u> </u> 	Nov.	Nov. 12, 1923. 1,047 Oct. 5. 13	3.	Ŏ	Oct. 27, 1923. 944 Sept. 19. 29	23.	W	Mar. 26, 1924. 1,042 Sept. 23. 25	15.	L.	Jan. 4, 1924. 1,064 Sept 20. 28	4.
Weight of Milk, 1st day Weight of Milk, 2nd day	16 16	Morn. A 16·1 10 16·2 10	Aft 16·1 16·3	Even. 16.0 16.7	Moin. 17.4 16.0	Aft. 16·6 16·6	Even 16.5 17.1	Morn. 17 0 18·1	Aft 17.8 17.8	Even 18·1 17·7	Morn. 14·8 15·4	Aft. 15·7 16·8	Even 16 3 14·4
Total	.:	32.3 33	32.4	82.7	33.4	21	33.6	35 1	35 6	35 8	30 2	32 5	30.7
Average	18	16-15 16	21 22	16.35	16.7	16 6	16.8	17 55	17.8	17 9	15 1	16 25	15.35
Percentage (Fat Composition of Solids other than Fat the Milk. (Total Solids Actual weight of Fat, in 1bs	4 8 EL O	4 11 8 8.95 8 13.06 14	5 59 9·11 14·70 0·91	6.03 9.15 15.18 0.99	3 89 9·29 13·18 0·65	4 93 9 37 14 30 0 82	5.18 9.12 14.30 0.87	3.91 9.37 13.28 0.685	4 00 9·18 13 18 0·71	3.89 9.11 13.00 0.70	4·75 9·47 14·22 0·715	4·43 9·47 13 90 0 72	4 81 9.25 14.06 0.74
Calculation of Points multiply by 20	13	01	18.2	19 80	13.0	16.4	17.40	13.7	14.2	14.0	14.3	14.4	14.80
Actual weight of Solids other than Fat, in Ibs.	<del> </del>	1.44	1.48	1.50	1 55	1.56	1.53	1.64	1.63	1.63	1.43	1 54	1 42
Calculation of Points multiply by 4		5.76	5.92	00.9	6 20	6.24	6 12	6 56	6.52	6 52	5 73	6 16	5 68
Points— For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	L	431	48·70 51·2 17·68			50 1 46 8 18-56			53 25 41.9 19 60			46 70 43.5 17 56	
Total Points for Milk Deductions	L . ;	11	117.6			115 5			114 8	į		107 8	
TOTAL POINTS GAINED FOR MILK	CK	11	117.6			115 5			114.8			107 8	
Points for time since Calving	<u> </u>		ı			1			l			1	
TOTAL, POINTS GAINED		11	117.6			115 5			1148			107.8	
Remarks and Awards		lst	lst Prize.			2nd Prize.			3rd Prize.		Hıgh	Highly Commended.	nded.

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:: late			<b>4</b>	Mar. 6, 1924. 1,008 Sept. 8. 40	4	Sej	Sept. 25, 1924. 969 Sept. 16,	24.	00	Oct. 11, 1923. 1,107 Oct. 3. 15	ဆိ
:		6 14.2	Morn. 14·5 11·3	Aft. 13·2 12·4	Even. 12·2 12 3	Morn. 13·9 16 1	Aft. 14·1 15 0	Even. 14 6 14·2	Morn. 11.3 11.9	Aft. 12·0 13 3	Even. 12·6 12 6
1		6 29.1	25 8	25.6	24.5	29.0	20.1	28 8	23.2	25.3	25.2
Average 14.5	1	8 14.55	12.9	12.8	12.25	14.5	14.55	14.4	11.6	12.65	12 6
Composition of Solids other than Fat 9.19 the Milk. Total Solids 12.58 Actual weight of Fat, in Ibs 0.45		4.67 4.85 9.77 9.61 14.44 14.46 0.69 0.705	3 58 9.08 12.66 0.46	5 07 9-07 14·14 0 65	4.81 8.97 13.78 0.59	3 36 9 06 12 42 0 49	4.27 9.47 13.74 0.62	4 08 9 26 13.34 0.59	4.02 9 60 13 62 0.47	5.14 9 64 14 78 0.65	5 49 9 41 14 90 0 69
Calculation of Points multiply by 20 9.0	9.0 13.8	8 14.1	9.2	13.0	11.80	8.6	12 4	11 80	9.4	13 0	13.80
Actual weight of Solids other than Fat, in lbs $1.3$	1.37 1.	1.45 1.40	1.17	91.16	1.10	1.31	1 38	1.33	1.11	1 22	1 19
Calculation of Points multiply by 4	5.48 5	5.80 5.60	4.68	4.64	4.4	5 24	5.52	5.32	4.44	4.88	4 76
For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	45 36 10	43.85 36.9 16.88		37 95 34 0 13·72			43.45 34.0 16.08			$\begin{array}{c} 36.85 \\ 36.2 \\ 14.08 \end{array}$	
Total Points for Milk Deductions	16	9.76		85.7			93 5			87.1	
TOTAL POINTS GAINED FOR MILK	00	9.76		85.7			93.5			87.1	
Points for time since Calving							ı			1	
TOTAL POINTS GAINED	97	97.6		85.7			93.5			87.1	
Remarks and Awards Hi	Highly Co	Highly Commended.	High	Highly Commended,	nded.	Hıghl	Highly Commended.	nded.	Highl	Highly Commended.	nded.

CLASS 22.—A	RE H	HEIFERS (BORN	(BORN	ON	OR AFFER IST		vausr,	August, 1923)—Continued.	Continu	ed.	1	
Name	لـــــا	309 Cargen Holm Mand 20th.	Mand	Cargen	310 Cargen Holm Letty 7th.	tty 7th.	Carge	311 Cargen Holm White Stockings 11th	v'hite th	KI	313 Kilfillan Gloria	rja
Born		Sept. 26, 1923. 1,090 Sept. 24. 24	28.	Mr	Mar 25, 1924. 1,060 Sept. 17.	7.	P.	Jan. 26, 1924 1,053 Oct 4.	<del>-</del> #	Ä	June 1, 1924 1,038 Sept 14.	<b>-</b>
Weight of Milk, 1st day	Moin. 16 1 16 0	Aft 16-9 17-2	Even. 16.0 16.8	Morn. 12.9 13 1	Aft 13 6 14·0	Even. 12·7 14 0	Morn 15 3 15 1	Aft 15 1 15 5	Even. 15 0 15 0	Moin 17 3 16·6	Aft 17 3 17·2	Even. 17 1 15 7
Total	32.1	34.1	32.8	0 97	27.6	26.7	30.4	30 6	30 0	33.9	31.5	20 21 20
Average	16.05	17.05	16 4	13 0	13 8	13 35	15.2	15 3	15.0	16 95	17 25	16 4
Percentage (Tat Composition of Solids other than Fat the Malk. (Total Solids Actual weight of Fat, in Ibs	3 73 9 17 12.90 0 60	$\begin{array}{c} 4.12 \\ 9.16 \\ 18.28 \\ 0.70 \end{array}$	4.84 9.10 13.94 0.79	4 33 9·29 13·62 0·56	4 63 9 01 13 64 0 64	4.84 8 98 13 82 0 645	4.37 9 69 14.06 0 665	4 45 9 63 14 08 0 68	5 10 9.68 14 78 0 765	10 30 0 27	8 0 2 1 0 2 2 4 2 4 2 4 2 4 2 6 2 6 2 6 2 6 2 6 2	4·10 9·36 13·46 0·67
Calculation of Points multiply by 20	12 0	14 0	15.80	11.2	13.8	12.9	13.3	13 6	15 3	F 9	11.2	13 40
Actual weight of Solids other than Fat, in Ibs	1.47	1.56	1.49	1.21	1 24	1 20	1.47	1 47	1 45	1 48	1 60	1 53
Calculation of Points multiply by 4 Points—	5.88	6.24	5.96	4.84	4 96	4 80	5 88	5.88	5 80	5 92	Ŧ 9	6.12
For weight of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (lbs. $\times$ 4)		49 50 41 8 18·08			40 15 36 9 14·60			45.5 42.3 17.56			50.60 30.0 18 44	
Total Points for Milk		109.4			91.7			105.3			99 0 10 01	
TOTAL POINTS GAINED FOR MILK		109.4			91.7			105.3			0 68	
Points for time since Calving		I			1			I				
TOTAL, POINTS GAINED		109.4			2 16			105 3			0 68	
Remarks and Awards		Reserve.		Highl Muriel	Highly Commended. Muriel Countess de la Warr Prize.	nded. de la	Highl Muriel	Highly Commended Muriel Countess de la Warr Prize.	nded de la	Hıghl	Highly Commended.	nded.

CLASS 23.—GUERNSEY COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK. BORN ON OR PREVIOUS TO 1ST AUGUST, 1921).

	4	ORN ON	BORN ON OR PREVIOUS TO 1ST AUGUST, 1921).	VIOUS T	OISTE	TOGOST,	1351).					
Number	Ĥ	314 Lemon Gadfly,	Ay.	Hadlı	316 Hadham Goldstream 11th.	ream	31 Mawga Glen	317 Mawgan Lady Glen 2nd	318 Downe Fleur Vimiera	318 E Fleur of miera	321 Chemmante of Carteret.	ante of net.
Born	Ř	Sept. 15, 1920. 1,178 Oct. 4,	20.	S	Sept. 3, 1919 1,017 June 20. 120	6	May 1,6	May 1, 1918 1,050 June 15. 125	Mar 20 1,1 June 11	Mar 26, 1918 1,157 June 26	June 5, 1918 997 July 16. 94	, 1918 ,7 16.
Weight of Milk, 1st day	Morn. 18·3 17·6	Aft 18·3 19·6	Even. 18 8 19·2	Morn. 15·5 16·6	Aft. 16 5 14·0	Even. 16 4 17 3	Morn. 15.3 17 6	Even 15·9 17·7	Morn. 27·0 25·6	Even. 22 9 24 5	Moin 20 8 22 · 0	Even. 21 2 20 6
Total	35 9	87.9	38.0	32.1	30 5	33 7	82.9	33.6	52 6	47.4	45.8	41 8
Average	17.95	18.95	19.0	16.05	15.25	16.85	16.45	16.8	26 3	23.7	21.4	20 9
Percentage (Fat Composition of Solids other than Fat the Milk. Total Solids Actual weight of Fat, nı libs	5 41 9·53 14 94 0·97	5.93 9.65 15.58 1.12	7 62 9 88 17.50 1.45	4 56 9 18 13·74 0 73	5 07 9.85 14.49 0.77	5.82 9.30 15 12 0 98	3 11 8 91 12 02 0 51	3.58 9.14 12.72 0.60	3 77 8 51 12 28 0 99	4 62 9 08 13 70 1 09	8 6 21 8 8 25 6 25 6 25 6 25 6 25 6 25 7 20 8 20 8 20 8 20 8 20 8 20 8 20 8 20 8	3.58 9.28 12.86 0.75
Calculation of Points multiply by 20	19 4	22.4	29.00	14.6	15.4	19.60	10.2	12.0	19 8	21.8	15 0	15.0
Actual weight of Solids other than Fat, m lbs	1.71	1.83	1.88	1 48	1 42	1.57	1.46	1.54	2.24	2 14	1.99	1.94
Calculation of Points multiply by 4	6.84	7 32	7 52	5.92	5.68	6 28	5 84	6 16	8.96	8 56	2 96	7 76
Points— For weight of Milk (lbs.)		55.90 70.80 21.68			48 15 49.6 17 88		883 22	5 15 15 15	50 17	0.00	1881	22 0 3
Total Points for Milk		148.4			115 6		29	67.5	109 1	1,	88	0
TOTAL POINTS GAINED FOR MILK		148 4			115.6		67	2	109	1	88	0
Points for time since Calving					8 0		8	1.3	7	#	ō	+
TOTAL, POINTS GAINED		148.4			123 6		7.6	0	116.5	ē.	93.4	*
Remarks and Awards	9	1st Prize, Stagenhoe Cup.	трое Сир.	2nd Pri Sta	2nd Prize, ; Reserve, Stagenhoe Cup.	erve, np.			3rd E	3rd Prize.	Reserve.	rve.

1st August, 1921)—Continued.	323 Hockley Marigold.	Dec. 7, 1918. 905 May 15. 156	Even. 15.9 15.3	31.2	15.6	4.58 9.48 14.06 5 0.715	14.3	1.48	5.92	30 1 26·6 11·28	88.0	089	11.6	9 62	
	Hockle	Dec.	Morn. 13·8 15 2	29 0	14.5	4.25 9.21 13.46 0.615	12.3	1.34	5 36						
OR PREVIOUS TO	::	:	::'	:	:	::::	:	in Ibs	:	 ibs. × 4)	::	FOR MILK	ving	TED	:
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GUERNSEY COWS (BORN ON	Number	Born Ilive weight, in Ibs Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day	. Total	Average	Percentage Fat Composition of Solids other than Fat the Milk. Total Solids Actual weight of Fat, in Ibs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Calculation of Points multiply by 4	For weight of Milk (lbs.)	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	Remarks and Awards
E															

CLASS 24.—GUERNSEY COWS (ENTERED

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	BORN AFTER
Morn, 18-2         Aft, Even, 18-7         Morn, Eyen, 18-6         I5-8         I5-8         I8-8         IR-8         IR-8	Feb. 17, 1923. 960 May 19. 152
28.1         27.7         29.8         42.8         43.5         38.1         38.5         38.5           14 05         18 85         14.06         21.4         21.76         16.55         16.75         19.25           8.16         5.6         5.60         9.11         8.88         9.02         8.67         9.70         5.58           8.99         9.00         9.11         18.00         12.68         11.96         16.90         16.10           10.725         0.726         0.78         0.78         0.79         0.79         16.10           11.4.5         15.4         16.40         17.6         15.8         10.9         19.8         21.4           11.26         1.25         1.83         1.9         1.96         1.43         1.62         1.84           5.04         5.00         5.32         7.6         7.80         5.72         6.48         7.86           5.04         5.00         5.32         7.6         7.80         5.72         6.48         7.86           5.04         46.50         5.32         7.6         7.80         5.72         6.48         7.86           104.2         3.8         3.4	Mon. Even. 15·7 11·1 12·3 13·0
14 05   18 85   14 05   21 4 21 75   10 55   10 75   19 25     5 15 56 56 6 569   4 12 3 068   3 29 6 70 9 5 58     14 14 14 16 6 14 70   18 08 9 778   11 096 15 60 9 11 14 14 14 14 14 14 14 14 14 14 14 14	28.0 24.1
6.15         5.56         5.50         4.12         3.66         5.90         5.58           14.14         9.10         18.88         9.02         8.87         9.70         9.57           14.14         14.76         18.68         9.79         11.96         15.60         1.07           14.15         16.4         10.88         0.79         0.545         0.99         1.07           14.5         16.4         10.89         17.6         16.8         10.9         19.8         21.4           1.26         1.25         1.83         1.9         1.96         1.43         1.62         1.84           5.04         5.02         7.6         7.80         5.72         6.48         7.86           42.56         3.8         7.6         7.80         5.72         6.48         7.86           46.3         3.6         15.4         1.22         1.84         1.56         1.5           104.2         3.6         9.2         7.6         2.9         9.4           104.2         104.2         9.2         7.6         9.4           104.2         103.8         7.81         9.4           104.2         103.8	14.0 12.05
14.5         15.4         16.40         17.6         15.8         10.9         19.8         21.4         2           1.26         1.25         1.83         1.9         1.96         1.43         1.62         1.84           5.04         5.00         5.32         7.6         7.80         5.72         6.48         7.36           46.56         33         34         30.7         33.3         30.7         30.7           46.8         34         15.4         12.2         15.4         15.4           104.2         92.0         76.2         94.9           104.2         92.0         76.2         94.9           104.2         11.8         1.9         94.9           104.2         103.8         78.1         96.7           104.2         103.8         78.1         96.7	8·71 4·01 8·71 9·37 14·42 13·38 0 80 0 485
1.26         1.25         1.83         1 9         1.96         1.43         1.62         1.84           5.04         5.00         5.32         7.6         7.80         5.72         6.48         7.86           42.56         43.16         33.3         33.3         39.5         39.5         39.5           15         16         33.4         12.2         15.4         15.9         99.0           104.2         92.0         76.2         94.9           -         11         1.9         2.0           -         11         1.9         2.0           -         104.2         103.8         78.1         90.5           104.2         103.8         78.1         90.5	16.0 9.7
6·04         6·00         6·32         7·6         7·80         6·72         6·48         7·80           42·56         43·15         33·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         39·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         30·3         3	1.22 1.13
43.15 83.3 33.4 10.7 15.4 12.2 92.0 76.2 92.0 76.2 11.8 1.9 103.8 78.1	4.88 4.52
92.0 76.2 92.0 76.2 11.8 1.9 1.9 103.8 78.1	26·05 4) 25·7
92 0 76 2 11 8 1.9 103.8 78·1	512
11 8 1·9 103·8 78·1 2nd Prize, Reserve.	TOTAL POINTS GAINED FOR MILK 51.2
103.8 78.1 2nd Prize. Reserve.	11.2
2nd Prize. Reserve.	62 ⋅4
	romanikos w

331 331 Salterfat, Downe Princes Calchill Quantic, Vera's Beauty 4th.  Nearly Till.	Sept 24, 1923         Jan. 31, 1924         June 23, 1924         Mat 4, 1924         Feb. 26, 1921.         June 2, 1924           1,026         882         882         881         882         881         882           1,026         1,026         1,026         1,026         1,026         1,026         1,026           1,026         1,026         1,026         1,026         1,026         1,026         1,026           1,026         1,026         1,026         1,026         1,026         1,026         1,026	Morn.         Byen         Monn.         Byen         Monn.         Byen         Monn.         Byen         Monn.         Byen         Monn.         Monn	8 25 9 30.5	12.95 15.25 16.4 12.95 15.25 12.95 15.5	4         66         4 · 46         4 · 82         4         69         6 · 72         3         63         4 · 38         1 · 22         4 · 70           9         38         9 · 64         9 · 66         8 · 27         9 · 67         9 · 61         9 · 61         9 · 61         10 · 61         11 · 80         11 · 80         11 · 80         11 · 80         12 · 61         13 · 20         13 · 80         11 · 80         13 · 80         10 · 80         10 · 80         10 · 80         10 · 80         10 · 80         10 · 60         11 · 60         11 · 60         11 · 60         11 · 60         11 · 60         11 · 60         11 · 60         11 · 60         11 · 60         11 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         12 · 60         13 · 60         13 · 60         13 · 60         14 · 60         13 · 60         13 · 60         13 · 60         13 · 60         13 · 60         13 · 60         14 · 60         13 · 60         14 · 60         14 · 60         14 · 60         14 · 60         14 · 60         14 · 60 <th>12.1 13.6 15.8 12.2 20.6 0.4 11.8 0.1 97 7 1</th> <th>1 22 1 .47 1 .58 1 07 1 .10 1 .17</th> <th>4.88 5.88 6.32 4.28 5.96 4.68</th> <th>29.7 31.65 28.2 26.45 21.05 20.09 29.6 20.4 32.8 21.2 18.8 16.3 10.84 12.2 10.24 9 18.8 16.3</th> <th>3 71.2 57.1 47.9 57.1 47.9</th> <th>70.1 79.8 41.8</th> <th>e~4.</th> <th></th> <th>and Awards Contagn Highly Highly Commended Commended</th>	12.1 13.6 15.8 12.2 20.6 0.4 11.8 0.1 97 7 1	1 22 1 .47 1 .58 1 07 1 .10 1 .17	4.88 5.88 6.32 4.28 5.96 4.68	29.7 31.65 28.2 26.45 21.05 20.09 29.6 20.4 32.8 21.2 18.8 16.3 10.84 12.2 10.24 9 18.8 16.3	3 71.2 57.1 47.9 57.1 47.9	70.1 79.8 41.8	e~4.		and Awards Contagn Highly Highly Commended Commended
Number Ilayes	nt, in 118.	day	Total	Average 16.75	Percentage Fat Soluts other than Fat	:	Calculation of Points mutuply by 20 1-49			<u> </u>	rts Gained 1		"roral points gainen	

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25.—GUERNSEY	AND REAL PROPERTY AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS
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1379) Continued.	340 Trewithen Poetry.	May 10, 1924. 850 Aug. 8. 71	Even. 14·6 15 4	30.0	15.0	5·18 9·32 14·50 0·78	15.6	1.40	5 6	28·75 29·0 10 8	68 6	9.89	3.1	71.65	Reserve.
	Tre	May 1	Morn. 12.8 14.7	27.5	13.75	4.87 9.49 14.36 0.67	13.4	1.3	61.50	SISIH	9			1	Res
AUGUST,	339 Trewithen Prose.	May 10, 1924. 918 Aug. 6. 73	Even. 13·7 13·5	272	13.6	4.59 8 93 13.52 0.625	12 50	1.21	4.84	25.8 22.4 9.28	57.5	57.5	3 3	80.8	Highly Commended.
TOT	Trev Pr	May 1 9 Au	Moru. 12·0 12 4	24.4	12.2	4 06 9·10 13 16 0·495	6.6	11.11	4 44	9191	ŗo.	5		9	Comm
OR ALLER	338 Hockley Princess May.	Aug. 26, 1923. 967 July 24. 86	Even. 14·9 14·4	29.3	14.65	4 85 9 31 14 16 0 71	14 2	1 36	5 44	28.7 27.8 10.64	67.1	67.1	4.6	71 - 74	3rd Prize.
NO NO	Hoc Princes	Aug. 26 96 July 8	Morn. 14·1 14·0	28 1	14.05	4.83 9.25 14.08 0 68	13.6	1 3	5 2	28 27 10	67	67	4	11	3rd I
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MOCH COLD FIRM	::	:··	::	otal		er than Fat	:	other than Fat, in Ibs	÷	4	s for Milk	OINTS GAINED FOR MILE			
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MOCT) COLUMN TO THE TENED OF	. :	:::	::	Total		er than Fat	:	t of Solids other than Fat, in Ibs	÷	4	::	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL POINTS GAINED .	:
MOCT COURT TITTE TROUBLE		:::	::	Total		: . : .	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in Ibs		eight of Milk (lbs.) eight of Fat (lbs. $\times$ 20) eight of Solids other than Fat (lbs. $\times$ 4)	s for Milk	TOTAL POINTS GAINED FOR MILE			÷

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(English	Roper
COWS	
26.—JERSEY COWS	
CLASS .	

		SORN O	N OR	PREVIO	Born on or previous to 1st August, 1921)	зт Аив	usr, 192	1).		1			1
Number Name		342 Windlesham Windflower,	sham ower.	Urs Be	343 Ursanne Belle.	Ham Que	345 Hamletta's Queen.	Rob Star	346 Roberta's Star 2nd.	3f Maste	350 Mastermaid,	35 Westlan	351 Westlands Cids Laly.
Born live weight, in its	1 1 1 1	Feb. 6, 1920. 971 Sept. 4,	1920.	Jan. 28 May	Jan. 26, 1918. 886 May 18. 153	Mar. 10	Mar. 10, 1918. 738 June 8 132	Oct. 1	Oct. 15, 1920. 894 Aug. 3. 76	J.m. 116 88 Mar 20	J.m. 19, 1920. 888 Mar. 31. 201	Feb. 15, 1921. 872 Sept. 14, 34	, 1921. 2 14.
Weight of Milk, 1st day	1882	Morn. 22.1	Even. 21·4 22 3	Morn. 13·7 13·5	Even. 13·6 13 4	Morn. 20·8 13·9	Fyen. 18·8 16 0	Morn. 19·9 24·9	Even 23.1 19.0	Morn. 17-7 12-1	Even. 14·7 23·1	Morn. 19·0 18·0,	Even. 19 0 18 9
Total	4	41.5	43.7	27.5	0.72	34 7	34.8	44.8	42.1	8-67	8.78	0 28	87.9
Average	×	20.75	21.85	13.6	13.5	17.35	17.4	- 67 - 7	21.05	14.9	18.0	18 5	18.95
Percentage Fat composition of Solids other than Fat the Milk. (Total Solids Actual weight of Fat, in Ibs	4 8 22 1	4.85 8.61 13.46	4.31 8.95 13.26 0.94	7.02 9 64 16.66 0.95	6.98 9.34 16.32 0.94	3·16 8 94 12 10 0·55	4 08 9.08 13.16 0 71	3 05 9 45 12 50 0 68	3.75 9.45 13.20 0.79	8.43 8.67 17.10 1.26	6.28 9.02 15.30 1.19	5.87 9.71 15.58 1.09	5.96 9.48 15.44 1.13
Calculation of Points multiply by 20	1	20.5	18 8	19.0	18 8	11.0	14 2	13 6	15.8	26.2	23.8	21 8	22.6
Actual weight of Solids other than Fat, in lbs	ı	1.79	1.95	1.31	1.26	1.55	1.58	2 13	1 99	1.29	1.71	1 8	1.80
Calculation of Points multiply by 4		7.16	7.80	5.24	5.04	6.20	6.32	8 48	2.96	5.16	6.84	7.2	2.5
For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)	1 : :	42.6 39.0 14.96	36	325	27.1 37.8 10.28	34 123	34·75 25 2 12·52	#81	43.45 29.4 16.44	88 449 112	33 8 49.0 12.0	37·48 44·4 14·4	37·45 44·4 14·4
Total Points for Milk Deductions		9.96		7.5	75.2	72	72.5	80	9.3	94	94.8	-96	96.3
TOTAL POINTS GAINED FOR MILK	M	96	9	7.5	75.2	72	72.5	89	3	94	94.8	96	96.3
Points for time since Calving	Ļ	0.4	-	11	11.3	8	9.2		3.6	12	12.0	-	
TOTAL POINTS GAINED		0.70		88	86.5	81	81.7	36	92.9	106	106.8	96	96.3
Remarks and Awards		Highly Commended.	ly ided.					Comi Reserve Tro	Highly Commended Reserve, Morrison Trophy		Highly Commended. National Butter Cup.	Highly Commended,	hly ended.

olden	20.	Even 13·1 13·4	5 9 5	13.25	9.05 10 55 19.60 1.20	24 0	1.40	5.60						
363 Mastermans Golden Cidoma,	June 18, 1920. 1,117 June 11. 129	Aft. 12·3 12·7	25 0	12.5	6.28 10.12 16.40 0.785	15.7	1 27	5.08	40 · 35 60 · 3 16 52	117 2	117.2	6.8	126.1	1st Prize.
	ام ا	Morn. 16.2 13.0	29 2	14 6	7 06 9 98 17 04 1.03	20.6	1.46	5 84						
. :	. :.	:.		•	:: .		Actual weight of Solids other than Fat, in lbs	:	<del>(</del> 4		Total Points Gained for Milk		:	:
: :	:: .		•	•	. ; ;;	÷	at, in	:	For weight of Milk (lbs.) For weight of Fat (lbs $\times$ 20) For weight of Solids other than Fat (lbs. $\times$ 4)	: :	D FOR	Points for time since Calving	TOTAL, POINTS GAINED	:
•	•	;	:	٠	Fat Solids other than Fat Total Solids Fat, in lbs	by $20$	han F	by 4	on Fe	Total Points for Milk Deductions	GAINE	since	rs G/	:
::	• ; ; ;		Total	Average	other Solids Ibs.	ltiply	other t	ltiply	For weight of Milk (lbs.) For weight of Fat (lbs $\times$ 20) For weight of Solids other th	ints for ns	OINTS	r time	POIN'	:
::	:::.	t day d day	ΪĊ	Ą	Fat Solids Total Sat, in	ts mu	olids e	ts mu	lk (lbs it (lbs lids o	Total Point Deductions	ral P	ints fo	TAI,	sp
::	in Ibs .: alving	ilk, 1si ilk, 2n			of H	f Poin	ıt of S	f Pom	t of Mi t of Fa l of Sc	Tot	To	Poj	TO	Awaı
<sub>н</sub> :	 eight, alved mee C	of M			Percentage mposition of the Milk.	tion o	weigh	ttion o	weight weight weight					ks and
Number Name	Born Live weight, in Ils Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage (Fat Composition of Solids other the Milk. (Total Solids Actual weight of Fat, in lbs.	Calculation of Points multiply by 20	Actual	Calculation of Points multiply by 4	For					Remarks and Awards
		, ,			- '	-	,		•					-

CLASS 27.—JERSEY COWS—(ENGLISH OR ISLAND BRED. ENTERED IN OR ELIGIBLE FOR THE HERD BOOK,

	371 Sixty Five.	July 24, 1922. 887 Sept. 7.	1. Even 24·3 27 3	51.6	75 25.8	55 5.15 81 9.41 6 14.56 1.33	26 6	2 2 43	48 9 72	48 55 48 6 18 2	115.4	115 4	0 1	115.5	lst Prize
	S	ļn.	Morn 22.4 23.1	45 5	22 7	4.85 9 31 14 16 1.1	22 0	2.12	œ						I
Military and Visite	370 Hollyhock of Hollywood	April 3, 1922. 813 July 5 105	Even. 17·4 16·8	34.2	17.1	4.76 8 82 13.58 0.81	16 2	1.50	00.9	34 35 30 0 12.32	76.7	7 97	6 5	3.5	Highly Commended.
23).	Hollyl Hollyl	April 8 8 Jul	Morn 17·5 17 0	34 5	17.25	3 97 9·11 13·08 0·69	13 8	1 58	6.32	38.	7.	26		83	Hı
usr, 19	367 pleford a Mary.	, 1923. 19 e 8. 82	Even. 15 4 18 5	33 9	16 95	5 · 83 8 93 14 · 76 0 99	19.8	1.51	6 04	32.8 39.8 11.6	71	c1	61	93 - 4	hly ended.
sr Aug	367 Stapleford Stella Mary.	May 28, 1923. 749 June 8. 132	Morn. 14 9 16 8	31.7	15.85	6.32 8.78 15.10 1 00	20 0	1.39	5.56	33	78	18	6	93	Highly Commended.
EVIOUS TO IST AUGUST, 1923).	ıyme.	က်	Even. 10 5 10 1	20.6	10.3	7.08 9.26 16.34 0.73	14.60	0.95	3 80						ıded.
PREVIO	366 Lingen Sweet Thyme.	July 17, 1923. 843 June 23. 117	Aft. 12 0 10 · 5	22.5	11 25	6.46 9.16 15 62 0.725	14.5	1.03	4.12	32 25 41.4 11 80	85 5	85.5	11	93 2	Highly Commended.
BORN AFTER 1ST AUGUST, 1921, AND PR	L,ingen	pf	Morn 10 8 10 6	21 4	10.1	5.75 9.07 14.82 0.615	12 3	26 0	3.88						Highly
BORN AFTER IST AUGUST, 1921, AND PREVIOUS TO IST AUGUST, 1923).	4 aleigh tre.	1922. 3 1 21. 0	Even. 17·4 19·1	36.5	18 25	6 58 9 38 15 96 1 20	24 0	1.71	6.84	36.0 45.2 13.56	∞ ,	80	0	8	rıze.
зт Аивт	364 Cids Raleigh Spectre.	Mar. 1, 1922. 873 April 21. 180	Morn. 16·7 18 8	35.5	17.75	5.99 9.49 15.48 1.06	21 2	1.68	6.72	36 45 13	94.8	76	12	106.8	2nd Prize.
ER 18	::	1.1:	: :	:	:	• • • • •	:	:	•	: <del>.</del>	: .	MILK	:	:	:
AFT	:	· ·	.:	:		• :	:	, in 1b	:	:: (lbs: ×	::	FOR	alvıng	NED	:
BORN	::	·:::		:	:	an Fa	20	n Fat	4	 1 Fat	Milk 	AINED	ince C	S GAI	
	÷.	:::.	i.	12	Average	her th lids s.	ply by	ter tha	ply by	< 20) er than	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL, POINTS GAINED	:
		:: :	lay day	Total	Ave	it lids of tal So , in 15	multi	ds of	multi	(lbs.) (lbs.) is oth	Total Pounts Deductions	L Por	ts for	AI, P	
			, 1st c			So Fat	Points	of Soli	Points	f Mulk f Fat f Solic	Tota. Dedu	TOTA	Poin	TOL	wards
	Number	Born Live weight, in lbs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Frat Composition of Solids other than Fat the Malk. Trotal Solids Actual weight of Fat, in lbs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs.	Calculation of Points multiply by	For weight of Milk (lbs.).  For weight of Fat (lbs. × 20)  For weight of Solids other than Fat (lbs. ×					Remarks and Awards
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inued.	878 Valse Brune 2nd,	April 4, 1923. 903 June 7. 133	Even. 19·1 19·5	38 6	19.3	4 92 9·14 14 06 0·95	19.0	1.76	7.04	37 6 35 1 13·76	86.5	86.5	9 3	95.8	Highly Commended.
Cont	Valse E	Apul 9 Ju 1	Morn. 17·6 19·0	36.6	18.3	4.41 $9.17$ $13.58$ $0.805$	16.1	1 68	6.72	3337	8	8		6	Comm
т, 1923	377 Treasure 31d.	Mar. 6, 1923. 855 April 24. 177	Even. 19·9 18 9	38.8	19.4	4.86 0.56 14.12 0 945	18 9	1.85	7.40	38.55 34 5 14 8	6.78	87.9	12.0	6-66	Reserve.
1st August, 1923)—Continued.	37 Treasu	Mar. 6 88 Apu	Morn. 18 8 19 5	38.3	19.15	13 72 0 65 0 72 0 78	15.6	1.85	7 40	38 34 114	87	87	12	66	Rese
ro lsr	376 nipete.	Oct. 23, 1921. 766 May 28, 143	Even. 19·7 11·2	30.9	15 45	5.25 8 99 14.21 0.81	16 2	1.39	5 56	31 · 55 31 · 2 11 · 52	· 00 ,	74.3	10.3	84.6	fıly ended.
REVIOUS	376 Tempete.	Oct. 23, 192 766 May 28, 143	Morn. 21.6 10 6	32.2	16.1	4.65 9.27 13 92 0.75	15 0	1 · 49	96.9	31 11	74	7.4	10	84	Highly Commended.
AND PE	4 stress.	1952. 13 7.	Even. 19 0 19 8	38.8	19 4	4.60 9.34 13.94 0.895	17.9	1 81	7.24	39.45 36.3 14.68	90.4	Ŧ	12.0	7.	rize.
r, 1921,	374 Postmistress.	Jan. 22, 1952. 1,013 Jan. 7. 284	Morn. 20·8 19·3	40.1	20.02	4.59 9.25 13.84 0.92	18·4	1.86	7.44	39 36 14	.06	06	12	102.4	31d Prize.
CLASS 27.—JERSEY COWS (BORN AFTER 1ST AUGUST, 1921, AND PREVIOUS TO	2 Jay.	3 1922. 128.	Even. 17.5 18.8	36.3	18.15	5.49 9.23 14.72 1.00	20.0	1 68	6 72	2188 52	6.	6-	0.	6	nly nded.
FER 1ST	372 So Gay.	Jan. 19, 1922. 918 April 28, 173	Morn. 16·7 17 4	34.1	17.05	5.20 9.10 14.30 0.89	17.8	1.55	6.20	35.2 37.8 12.92	85.9	85.9	12.0	97.9	Highly Commended.
I AB	::	1:::	: :	:	:	: . :	•	:	:	<del>4</del>	::	AILK.	:	:	
(Born	٠:	:::			:	: : : : #	:	Actual weight of Solids other than Fet, in 165.	:	Johnston weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. ×	.:	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	INEC	:
OWS	::	. : : •	• ;		:	han E	y 20	nan Fe	y 4	 an Fat	Mulk	GAINE	since (	3S GA	÷
XX C	.:	: : :	. :	Total	Average	other 1 Solids Ibs.	tiply l	ther t	tiply !	.) × 20) her th	nts for as	SINIC	r time	POINT	:
ERSI		::. <u>.</u>	t day d day	To	Ą	Solids other than Fat Total Solids	ıts mul	olids o	its mul	uk (Ibs at (Ibs. alids of	Total Points for Milk Deductions	TAL P	ints for	TOTAL POINTS GAINED	sp
7.—J	::	Born I,ive weight, in lbs. I,ast Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			~	Calculation of Points multiply by 20	ht of S	Calculation of Points multiply by	t of Mi t of Fe t of So	To	To	Po	10	Remarks and Awards
ASS 2	et	weight Calved since (	ht of M ht of M			Fercentage Composition of the Milk.	lation	d weig	lation	weigh weigh weigh					rks an
Ğ	Number Name	Born Live Last Days	Weigl Weigl			Fe Comp th Actus	Calcu	Actue	Calcu	Points— For we For we For we					Rema

CLASS 28.—JERSEY HEIFERS—(ENGLISH OR ISLAND BRED.	LISH OR IS ON OR	SLAND BREI AFFER IST	OR ISLAND BRED. ENTERED IN ON OR AFTER 1ST AUGUST, 1923).	× .	OR ELIGIBLE FOR THE HERD BOOK.	FOR TH	те Нек	в Воок	. Born
Number		383 Countess Paulme.	384 Prudence of Hollywood.		385 Nancy.	38 Lingen Jasu	386 Lingen Oxford Jasmine.	387 Spring Fern.	17 Ifern.
Born i. i. i. i. i. i. i. i. i. i. i. i		June 11, 1924. 694 Aug. 6. 73	Aug. 16, 1923. 816 June 30. 110	<u> </u>	Jan. 29, 1924. 710 Aug. 4. 75	Aug. 9	Aug. 9, 1924. 739 Oct. 1 17	Mar 25, 192 676 Aug. 28. 51	25, 1924. 676 ug. 28. 51
Weight of Milk, 1st day Weight of Milk, 2nd day	Morn, Aft. 11.0 14.8 12.0 11.6	t. Even. ·8 12 2 ·6 11 ·5	Morn. Even. 11.5 13.7 13.2 12.4	1. Morn. 10 4 2.8	Even. 10·3 9 7	Morn, 11 3 13 4	Even. 12 3 13·1	Morn. 9 8 12.3	Even. 8.9 12.5
Total	23.0 26	4 23 7	24.7 26.1	13 2	20.0	24.7	25.4	1.55	21.4
Average	11.5 13.2	.2 11.85	12.35 13.05	9 9 9	10.0	12.35	12.7	11 05	10.7
Percentage Fat	4.46 8.86 13.32 0.51	6.81 6.07 9.07 8.67 15.88 14.74 0.90 0.72	3.32 5.20 10.36 9.42 13.68 14.62 0.41 0.68	2 4.90 2 9.50 2 14.40 8 0.32	5.29 8.93 14.22 0.530	4.88 9.52 14.40 0 60	4.05 9 47 13 52 0 515	5.29 9.35 14 64 0.585	3.67 9.67 13.34 0.395
Calculation of Points multiply by 20	10.2 18	18.0 14.40	8.2 13 6	6.4	10 6	12 0	10.30	11 7	6.7
Actual weight of Solids other than Fat, in Ibs	1.02	1.20 1.03	1.28 1.23	3 0.63	68 0	1.18	1.20	1.03	1.04
Calculation of Points multiply by 4	4.08 4	8 4.12	5.12 4.92	2 2.52	3 560	4.72	4.8	4.12	4 16
For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs. × 4)		36-55 42-6 13-00	25 4 21.8 10.04		16 6 17.0 6.08	883	25 05 22.8 9 52	21 19 8	21 75 19 6 8·28
Total Ponts for Milk Deductions	6	92.2	57.2		39.7	56	56.9	49	49.6
TOTAL POINTS GAINED FOR MILK		92.2	57.2		39.7	56	56.9	49	49.6
Points for time since Calving		3.3	0.7		3.5		1	1	1.1
TOTAL, POINTS GAINED	36	95.5	64.2		43.2	56	56.9	50	2.09
Remarks and Awards	1st 1	lst Prize.	Highly Commended,	_					

-			110	U 11.	zunung	1	DOCE	, ,						
401 ds Petune	ril 12, 1924 831 Sept. 18. 30	n Even. 9 17 2 7 15 8	7 33 0	85 16 5	65 5 20 67 9 58 82 14 78 645 0 86	9 17.2	34 1 58	36 6 32	30 · 35 30 · 1 11 68	72 1	72.1	ı	72.1	3rd Prize.
<i>-</i> 3	Ψ	Moi 13 14	27	13	4040	갈	-	rc						
98 l's Rose.	0, 1924. 28 3, 23. 56	Even. 17 2 12 2	Ŧ 67	14.7	4 94 8·70 13 64 0 725	14 50	1.28	5 12	4 65 0 1 9 0	3.8 0.0	3.8	1.6	5 4	
!	Aug. 2	Moin. 8.5 11.4	19 9	9.95	22.29 12.08 0.28	5 6	0 97	88 88	01 21	1	4		4	
93 rst Joan.	7, 1924. 78 of 20.	Even. 15·5 15 3	30.8	15 1	4 80 9 44 14 04 0 71	14 2	1.45	5 80	8.85 7.3 9.8	3.9	6.6		3.9	Hıghly Commended,
	May 8	Morn. 13.2 13.7	36.9	13 45	4 83 9 25 14 08 0 65	13 0	1 25	5 0	2001	90 '	9		9	Comm
92 Dazzle.	9, 1924. 93 7 28.	Even. 10-2 9-0	19.3	9 6	4.89 9.75 14.64 0.47	F·6	0 94	3 76	200	8	16.		0	
36 Loseley	June 30 60 July 8	Morn. 11.2 8 8	0.03	10 0	5 08 9 56 14 64 0 51	10.2	96 0	3 84	100	70			19	
May 3rd.	, 1924. 41 . 30.	Even. 17.6 19 3	36.9	18.45	5.04 9.32 14.36 0.93	18.6	1.72	6.88	.55 6 .08	¢1			1	Prize.
36 Patsy's 3	Mar. 6 Aug	Morn. 16.2 16.0	32. 2	16.1	4 02 9 62 13 64 0 65	13.0	1 55	6.20	81 13	79			80	2nd Prize.
oo Yrystal.	, 1924. 0 15.	Even. 19.2 17.2	36 4	18 2	4.49 9.05 13 54 0 82	16.4	1.65	09.9	55 ·3 ·16	0 _	0		0	rve
	Mar. 1 71 Sept	Morn. 15·1 15·6	30 7	15 35	3.23 9.03 12.26 0.495	6.6	1 39	5.56	83 26 112	긴	27.		57	Reserve
1 1	:			:	::::	•	ņ	•	:: 4	. :	MILK	•	•	•
1 : :	: : : :				:::,	:	l, 111 11	:		::	FOR	alving	NED	
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::	· ;	:.	<b>1</b> 1	rage	her th lids s.	iply by	her th	id Viqi	< 20) er tha	ts for	NTS G	time si	LNIC	•
::	: - : :	day day	Tot	Ave	at olids of otal So t, in 15	s mult	ids of	mult	(115s) (115s.) ds oth	1 Pom	IL POI	ts for	AI, P	T/C
.:		k, 1st ( k, 2nd			of Fat	Points	of Sol	Points	of Milly of Fat of Soli	Tota Dedi	TOTA	Poin	TOT	Award
	ight, ii Ived	of Mill of Mill			ntage tion c fulk. reight	ion of	reight	ion of	eight ceight				and ,	
Number Name	Born Live wei Last Cal Days sin	Weight (			Perce Composi the M	Calculat	Actual v	Calculati	For w For w For w					Remarks and Awards
	390   391   392   393   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398   398	10   10   10   10   10   10   10   10	1.   1.   1.   1.   1.   1.   1.   1.	High light   Total   Aug. 20   19-24   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug. 30   Aug	Hi, iii lbs	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists   He in lists	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

ж															
CLASS 29.—KERRY COWS (ENTERED IN OR ELIGIBLE FOR THE HERD BOOK).	407 Hattıngley Hıgh Kıck.	June, 1919 978 Sept 25. 23	Even. 23·2 24 0	47.2	23 6	$\begin{array}{c} 4 & 65 \\ 9 & 17 \\ 13 \cdot 82 \\ 1 \cdot 10 \end{array}$	22 0	2 17	89.8	46 85 40.7 17 28	8.101	104 8		104.8	3rd Prize.
(ENTE	Hattıng J	June Sep	Morn. 22·1 24·4	46.5	23 25	4 03 9 23 13·26 0·935	18 7	2.15	8 60	441	10	10		10	3rd
29.—KERRY COWS (ENTERE ELIGIBLE FOR THE HERD BOOK)	406 Hattıngley Haughty.	May 30, 1920. 1,188 Sept 13. 35	Even. 24 2 24·5	48.7	24.35	$\begin{array}{c} 4 & 30 \\ 9 \cdot 60 \\ 13 \cdot 90 \\ 1 \cdot 05 \end{array}$	21 0	2 34	98 6	50 25 42 2 18·96	111.4	111.4	ı	111.4	2nd Prize , Reserve, Kerry Cup.
KERR LE FOR	Hat	May 1 Sej	Morn. 25·6 26·2	51.8	25 9	4·10 9 24 13 34 1·06	21.2	2 40	09 6		1	1		1	2nd Reserv
ss 29.—] Eligib	404 Coquet Gıpsy.	May 12, 1917. 1,003 Sept 13.	Even. 29·6 27·3	56 9	28 45	4 30 9.02 13.32 1.23	24.6	2 57	10.28	57 05 43 3 20 32	120 7	51.2 120.7		2 0	lst Prize, Kerry Cup.
CLAS	Coque	May 1 1, Sep	Morn. 27·8 29 4	57 2	28 6	3.27 8.79 12.06 0.935	18 7	2.51	10.04	70 44 61	15			120	1st Kerr
an on rued.	402 Golden Beech Daisy.	Aug 25, 1923. 855 Mar. 28. 204	Even. 21 · 3 14 · 3	35 6	17.8	4.93 9.35 14.28 0.88	17 6	1 67	89 9	28 2 22.4 10.6	0.0	51.2		5	Highly Commended.
CLASS 28.—JERSEY HEIFERS (Born on or after 1st August, 1923)—Continued.	40 Golden Da	Aug 2 8 Mar 20	Morn. 5.9 14.9	20.8	10.4	2.28 9 44 11.72 0.24	4 8	86 0	3 92	22 10	61 01	51.2		63	Hıg
(FER 923)-	.:	:::	:	:	<u> </u>	:::	•	:	:	. · · <del>(</del>	•	MILK	<u>.</u>	:	:
HE sr, 1		: :	٠:		•	ш		, m ll	:	.: (Ibs.	:	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	NED	:
SEY		:::	: •	:	:	ii. :-	50	ın Fat	4	 n Fat	vrilk 	AINED	nce C	GAI	:
JER	. :	:···	. :	-	age	Frat Solids other than Fat Total Solids Fat, in Ibs.	ply by	er the	ply by	20) er tha	Total Points for Milk Deductions	NTS G.	ime si	TOTAL POINTS GAINED	:
28.—		. : . :	ay lay	Total	Average	ids off al Sol m Ibs	multij	ds oth	multy	(lbs.) lbs. x ls othe	Total Points Deductions	r Pon	s for t	II, PC	
ASS R AF		lbs	1st d 2nd c			-~-·	oints	f Sob	oints	Mulk Fat (	Total Dedu	TOTA	Point	Tor.	wards
5°		ht, iii ed e Calv	Milk			age on of lk. ight o	n of F	aght c	n of E	ght of ght of ght o					and A
	Number Name	Born I.ive weight, in lbs. I.ast Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Percentage Frat Composition of Solids other the Milk. Total Solid Actual weight of Fat, in Ibs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Calculation of Points multiply by 4	Founts—For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solids other than Fat (lbs.					Remarks and Awards
						·									

BORN ON OR AFTER IST AUGUST, 1923).													_		
lsr Aug	417 Moonstone of Warren.	Jan. 15, 1924. 843 Aug. 13. 66	Even. 14·3 13·8	28.1	14.05	4.57 9.33 13.90 0.64	12.8	1.31	5.24	26.75 23 3 9.92	0.09	0.09	2.6	62.6	3rd Prize,
AFTER .	Moons Wa	Jan. 1 8 Aug	Morn. 12·7 12·7	25.4	12.7	4.13 9.25 13.38 0 525	10.5	1.17	4.68	200	5	50		9	3rd
ON OR	416 Chaldon Countess 1st.	Sept. 1, 1923. 993 Sept. 14.	Even. 14·1 14·8	28.9	14.45	4·12 9·24 13·36 0 60	12 0	1.33	5.32	27 · 15 20 · 0 10 · 2	57.4	4.		57.4	Reserve.
BORN	Counto	Sept. 1	Morn. 12.5 12.9	25.4	12.7	3·13 9 61 12·74 0·40	8.0	1 22	4.88	20 20 10	57	57	,	57	Rei
BOOK.	412 Wadlands Flash Drops.	Dec. 9, 1923. 786 Sept. 1. 47	Even. 15·8 16 2	32.0	16.0	4.05 9.23 13.28 0.65	13 0	1.48	5.92	31.0 26.6 11.4	0.69	Total Points Gained for Milk         70.4         69 0         57.4           Points for time since Calving          0.3         0.7         —		2.69	2nd Prize.
CLASS 30,-KERRY HEIFERS (Entered in or Eligible for the Herd Book.	Wad Wad Flash	Dec. 9	Morn, 15·5 14·5	30 0	15.0	4.50 9.12 13.62 0.68	13.6	1.37	5.48	31 26 11	69	69	0	69	2nd ]
FOR TH	411 Wadlands Flash Mona.	uy 23, 1924. 744 Sept. 5.	Even. 15·2 16·8	32.0	16.0	4.12 9.04 13.16 0.66	13.2	1.45	5.80	32.3 26.4 11 68	₹-02	.4	e:	7.07	rize.
CIGIBLE	Wadi Flash	May 23, 1924. 744 Sept. 5.	Morn. 14·8 17·8	32.6	16.3	4.04 9.02 13.06 0.66	13.2	1.47	5.88	32 26 11	70	20	0	70	1st Prize.
R E	::	1111		:	:		:	:	•	. : 4	::	TLK	:	:	i
N.	. :	::::	: :	:		::::	፥	in 1b	:	. : S		FOR ]	lving	TED	:
RED	÷	::::		:	:	n Fat	50	ı Fat,	₩.	 Fat (1	¥ :	INED	ce Cai	GAID	:
ENTE	: :	1111	: :			tha	y by	r tha	y by	20) than	Total Points for Milk Deductions	rs GA	ne sin	TOTAL, POINTS GAINED	i
RS (				Total	Average	Fat Solids other Total Solids Fat, in Ibs.	ultipl	s othe	mltipl	bs.) other	oints	POIN	for tin	POI	:
IFE	: :	33 33	st da nd de			Fat Solic Tota Fat, i	ints n	Solid	ints n	filk (1 fat (11 folids	Total Points Deductions	OTAL	oints	OTAI	urds
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RRY	# :	veight Alved since	it of N			Percentage (Fat Composition of Solids other the Milk. (Total Solid Actual weight of Fat, in lbs.	ation	Actual weight of Solids other than Fat, in lbs	ation	Provedent of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (lbs. $\times$ 4)					lks am
KE	Number Name	Born Live weight, in Ibs. Last Calved Days since Calving	Weight of Milk, 1st day Weight of Milk, 2nd day			Per Comp th Actua	Calculation of Points multiply by 20	Actua	Calculation of Points multiply by 4	For					Remarks and Awards
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		Even. 11·1 11·3	22.4	11 2	3.96 8 66 12.62 0.44	8.80	26.0	3.88						t Cup.
420 Barbara	1915. 743 April 14. 187	Aft. 12 8 11 4	24.2	12.1	4.92 8 62 13.54 0.595	11 9	1.04	4.16	35 05 29 5 12·12	76.7	2.92	12.0	88 7	1st Prize, Nutt Cup.
		Morn. 11·7 11·8	23 5	11.75	3.74 8.66 12.40 0.44	8.8	1.05	4 08		and a great first				1st I
419 Just Found of Hookstile.	r. 15, 1919. 819 July 28. 82	Even. 21·7 19·4	41.1	20 55	2.90 8.96 11.86 0.60	12.0	1.85	01.7	41.85 22.5 14.76	79·1 20·0	1	<b>01</b>	63 · 3	Reserve, Nutt Cup.
419 Just Four Hookst	Mar. 15, 1919. 819 July 28. 82	Morn. 20·6 22 0	42.6	21.3	2·46 8 60 11·06 0·525	10.5	1.84	7 36	1281	79 20	59	4	63	Reserve
s ow p 14th.	1023.	Even. 13 3 13 7	27 0	13.5	4.53 9.65 14.18 0.61	19.2	1.30	5.20	35 32 32	6.	6		6	
418 Barrow Buttercup 14th.	April 16, 1923. 640 Sept. 9. 39	Morn. 13·7 14 0	27.7	13 85	4.33 9.25 13.58 0.60	12 0	1.28	5.12	27 35 24·2 10·32	6.19	6.19	I	6.19	
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**************************************	1. ·:	Weight of Milk, 1st day Weight of Milk, 2nd day	Total		Percentage Frat Composition of Soulds other than Fat the Milk. Total Soilds Actual weight of Fat, in 1bs	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in 1bs.	Calculation of Points multiply by 4	eight of Milk (lbs.)	. !	TOTAL POINTS GAINED FOR MILK	Points for time since Calving	TOTAL POINTS GAINED	:

## THE MILKING TRIALS FOR GOATS, 1926.

By Thos. W. PALMER.

The Milking Competitions for the goats were held under exactly the same conditions as at the 1925 Show, *i.e.*, "Star" or "Q Star" Milkers, and goats not eligible for these distinctions. The qualifications for "Star" and "Q Star" have been explained in previous issues of the Journal, so it is not necessary to recapitulate.

The entries numbered 27, comparing with 18 at the 1925 Show. Sixteen goats were entered in the Star Class, and 11 in the Non Star Class

Class 38. "Star" or "O Star" Milkers.—Only seven of the sixteen goats entered actually competed, but the competition between two of the animals was very keen. At the end of the first day's milking, "Atherstone Collette" Q\*Q\* had a total of 12.3 lbs., whilst" Didgemere Dream "Q\*\* had vielded 12.2 lbs. The following day, the first named goat, though dropping 6 lb. at the morning milking, pulled up on the evening, and equalled her previous day's yield. The other goat gained in the morning, and dropped ·1 in the evening, her total for the day being 12.3 lbs., thus "Atherstone Collette" Q\*Q\* had an average of 12.3 lbs. for milk, and "Didgemere Dream" Q\*\* 12.25 lbs. butter fat for these goats was 4.59 per cent., 2.78 per cent., 3.11 per cent. and 3.74 per cent. respectively, consequently "Atherstone Collette "Q\*Q\* lost 1 point. The final result was that "Atherstone Collette " Q\*Q\* received a total of 27.5, and "Didgemere Dream" Q\*\* a total of 26.94, a difference of .56. For some of the Trophies, inspection and milking points have to be taken into consideration. The Judge, in awarding the inspection points, gave "Didgemere Dream" Q\*\* 5.50, and "Atherstone Collette" Q\*Q\* 5.00, so that "Atherstone Collette" Q\*Q\* won these Trophies by a margin of ·06! I do not remember such a keen or close competition at the Dairy Show. Miss Booth's "Atherstone Collette" Q\*Q\* not only won first prize in this class, but also the Baroness Burdett Coutts Cup. the Tremedda Selene Cup, the Dewar Perpetual Challenge Trophy, and the Dual Purpose Challenge Certificate. She also, with "Springfield Lealty," won the Dewar Cup. Mrs. Abbey's "Didgemere Dream" Q\*\* won the second prize, and in addition, was reserve for all the above Cups, whilst she won the Challenge Cup for the Best Goat in the Show by inspection, also Challenge Certificate for this honour, and with two of her stable companions ("Didgemere Delilah" \*Q\*Q\*Q\* and "Didgemere Delia") won the Riding Challenge Cup for the Best Group of Three Goats exhibited by the same owner. The third prizewinner in this class was Miss Booth's "Springfield Unity" Q\*Q\*Q\* (a daughter of the first prizewinner, "Atherstone Collette" Q\*Q\*), vield 9.4 lbs., total points 25.22.

In Class 39, six out of the eleven goats entered, competed. Mrs. Abbey secured all three prizes with "Didgemere Dogrose," yield 11-6 lbs., total points 24-84; "Didgemere Dulcette, "yield 10-55 lbs., total points 24-55; and "Didgemere Delia," yield 8-3 lbs., total points 19-15, respectively.

The classes for Inspection were practically as last year, and I now classify the goats in the Milking Competition, as they are entered for inspection:—

 ${\it Class~40.}$   ${\it Toggenburg.}{\rm -\!Two~entries~for~inspection,~but~none~for~milking.}$ 

Class 41. British Toggenburg and British Saanen.—Nine entries, five of which were entered in the milking, but only two competed. These were Miss Booth's "Atherstone Collette" Q\*Q\*, which won first in Class 38, after being in milk 226 days, and the same exhibitor's "Springfield Unity" Q\*Q\*Q\*, which won third in the same class, her lactation period being 193 days.

Class 42. British Alpine.—Eight entries, all the goats being entered in the milking classes, but only four competed, two in the Star Class, these being Mrs. Abbey's "Didgemere Delilah" \*Q\*Q\*Q\*, yield 9-6 lbs., lactation period 225 days, total points 24-74, and Mrs. Morcom's "Cornish Humbug" Q\*, yield 8-95 lbs., lactation 128 days, total points 22-23. Both goats received High Commendation. The remaining two goats were in the Non Star Class—Mrs. Abbey's "Didgemere Dulcette," which won second prize, and the same exhibitor's "Didgemere Delia" being third, the lactation period being 197 and 170 days respectively.

Class 43. Saanen.—Four entries, one being also entered in the Milking Trials, but did not compete.

Class 44. Anglo-Nubian.—Four entries, two being entered in the Milking Trials, but did not compete.

Class 45. Any Other Variety.—Nine entries, all of whom were entered in the Milking Competitions, but only five competed. Of these, "Didgemere Dream" Q\*\* has already been referred to. She was in milk for 188 days, and secured second prize in Class 38. Her twin sister, Mrs. Abbey's "Didgemere Deebee," was Reserve in Class 38, yield 10·1 lbs., total points 24·81, lactation 224 days. Mrs. Abbey's "Didgemere Dogrose" was first in Class 39, yield 11·6 lbs., total points 24·84, lactation period 132 days.

One goat was deficient in butter fat at one milking, this, the lowest percentage of butter fat being 2.78 per cent., whilst the highest percentage was 6.45 per cent. The following is the result of the analysis:—One sample under 3 per cent., seven samples between 3 per cent. and 4 per cent., ten samples between 4 per cent. and 5 per cent., seven samples between 5 per cent. and 6 per cent., and one sample over 6 per cent.

I append the usual tabulated statements.

TABLE I.

Description.			Number in Class.	1	Average	Averaĝe			Average	1	Average	Number of Annuals, below	r of below	Average
Fatered.	Fatered.	Entered.	1 ''	Com- peting.	Weight, of Milk.	Yield of Milk.	Highest Yield.	Lowest Yield.	pernod of Lacta- tion.	Average Solid Fat. not Fat	Solid not Fat	Stands for Fa	at.	points Gained.
					lbs.	lbs.	lbs.	Ibs	days			а,ш.	p.m.	
Toggenburg	:			1		-		!	1	1	1	1	ı	1
British Toggenburg and British Saanen 5	10	ъq		61	154	10.85	12.3	9.4	509	4.50	8.56		-	26.36
British Alpine 8	∞ :	∞	•		163	9 35	10.55	8.3	180	12.4	8.63	[	[	22 66
Saanen 1		-	,		1	1		and the second	1		ļ	[	1	1
Auglo-Nubian 3	61	cì.	ı	1	l	1	1		-	[	j	1	1	1
Any Other Variety 9 5	6	6	7.0		153	19.6	12 25	6.55	165	4.23	8.46		ı	22.31
			1	_										

## TABLE II.

		The	M	ilk	ing	T	ria	ls f	or	Go	ats	, 19	926					18
	is.	p.m.	9 03	21.6	0.27	9.19	9.21	8.98	9 10	8 64	9.78	87 6	8.88	9.05	8.99	8.88	8.95	8.73
rtages.	Solids	a.m.	8.89	9.05	9.15	20.6	9.32	8.78	8.99	8.53	12.6	08 6	8 75	8 98	8.93	8.75	80.6	8.60
Percentages.		p.m.	3 89	4 72	5 50	4 52	4 18	5.25	5 38	4.63	5.91	4 95	4 96	4 62	4 78	5.38	5.38	4.60
	Fat	a m.	4 13	19.7	5 64	09 †	4.31	18 4	4.95	4 38	5.85	5 07	5.10	4 41	96 €	4.88	4.86	3.87
rest	7.07 197		4.5	6.7	4	0	9.9	₹ 65	4 85	7 15	17	1.0	6.6	9.6	. ž. 1	0 7	3.85	6.35
	giH SiY		10.8	0 6	11.3	12.6	10 2	11 25	13.35	12 3	8	1~ 20	9.4	8	8.5	8 6	8.55	11.6
Milk to	19vA o Hgisw o 19q		6 7	1.1	8.9	0 2	8 0	7.8	9.8	96 6	4.1	 *	6.1	6.1	8 9	6.2	61	8.45
rage	weight of Milk.	p.m.	3.1	3.5	3.1	3.6	eo ro	ന	8.8	4 88	0.7	51 61	8.7	6.3	6.61	 	œ 61	4.09
Aye	weigi Mi	a.m.	3.6	8.9	3.7	4	₩,	4.	***	5.08	61	5.6	63 63	63 61	3.9	8.4	3,4	4.36
tob	Averorious Perior Bracta	days.	261	219	192	190	188	200	218	189	220	196	145	188	147	182	180	150
of each	Averag o idgisw minA	lbs.	1	130	145	144	142	149	152	168	I	113	123	131	127	138	131	136
stats	Mumb ninA oqmo2		9	7	16	14	9	13	6	2	15	ទូ	7	57	ra	13	-1	9
	Year of Show.		1919	1920	1931	1922	1923	1924	1925	1926	1919	1920	1921	1922	1923	1924	1925	1926
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	of Class		:	:	:	:	:	:	:	:	Milkers	E	:	E	:	:	:	:
	Description of Class.		:	Milkers	=		: :		2		Star	*	a	2		2	2	2
	Des		kers	O Star							ible as							
			Star Milkers	Star or		8	: 2			2	Not eligible as		2	£	f	2		a

CLASS 38.—SHE GOATS (QUALIFIED AS "STAR OR '()' STAR MILKERS").

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Number		456 Atherstone Collette.	457 Springfield Unity.	field y.	464 Cornish Humbug	4 ush bug	467 Dıdgeme Delilah	467 Didgemere Dehlah	481 Cornish Magpie.	il ush pie.	485 Didgemere Deebee	5 mere see
Born i.i.s		Feb 7, 1921 161 March 6 226	Feb. 13, 1924. 147 April 8. 193	1924.	Mar. 10, 1923, 146 June 12, 128	, 1923. 6 112. 8	Mar. 19, 1922 178 March 7. 225	19, 1922. 178 urch 7.	Feb. 25, 1922. 149 May 27 141	25, 1922. 149 y 27 141	Feb. 17, 1923 191 March 8 224	1923. 1 h 8
Weight of Milk, 1st day	Morn. 6.5 5 8	n. Even. 5 5·9 8 6·4	Morn. 4·8 4·6	Even 4.5	Moin. 4 5 4 ·8	Even. 4·1 4·5	Moin. 5·3 4·9	Even. 4 · 8 4 · 2	Моти. 4·0 3 6	Even. 3.4 3 3	Morn. 4·7 5·5	Even. 5·1 4 9
Total	21	3 12.3	9.4	Ť 6	9.3	8 6	10 2	0.6	9 2	2 9	10 2	10 0
Average	9	15 6 15	4.7	1-	4 65	£ 5	5 1	4. 70	38	3 35	5.1	5.0
Percentage (Fat Composition of Solids other than Fat the Milk. (Total Solids Actual weight of Fat, in Ibs	8:21 12:80 0:28	59 2.78 21 8 40 30 11 18 28 0 17	5.41 8 75 14.16 0.255	5 23 8 89 14.12 0.246	4·31 9 31 13·62 · 0 20	5 28 9 42 14·70 0 227	8 28 12 62 0 22	5 05 8 33 13 38 0 228	4 57 8 85 13 42 0 17	6 45 9 13 15·58 0·216	4.36 8.42 12.78 0.22	3.91 8.33 12.24 0.196
Calculation of Points multiply by 20	5	9 3 40	5 10	4 92	4 0	4.54	4 4	4 56	3.4	4.32	4 4	3.92
Actual weight of Solids other than Fat, in lbs	0	505 0.52	0 41	0.416	0 43	0.405	0 42	0.375	0.34	0 306	0 43	0.417
Calculation of Points multiply by 4	91	2.020 2.080	1 640	1 664	1 72	1 620	1 68	1 500	1 36	1 224	1 72	1 668
For weight of Milk (lbs.)		12 3 9·0 4 1	9 4 10·02 3·304	# 27 70	8 95 8 54 3 3 3 4	822	G 00 11	6 96 18	12-12	15 72 584	10·1 8 32 3 388	388 1
Total Points for Milk Deductions		25 4 1 0	25 22 27 1	e.i	20.83	82.	22	さし	17	45	21	81
Total Points Gained for Milk		24 4	22 72	61	3 02	83	121	7.4	17	45	12	81
Points for time since Kıddıng.		3.1	2.5		1.4	4	8	0	1	7	3.0	0
TOTAL POINTS GAINED		27.5	25.22	67	22 2	23	24	74	19 15	15	24	81
Remarks and Awards	Ist Prize Burdett-Co Tremedd	1st Prize Baroness Burdett-Coutts Cup Tremedda Selene Cup Dewar Trophy.	3rd Prize.	ize.	Нід	Highly Commended.	Highly Commended.	hly ended.			Reserve and Highly Commended	Reserve and Highly Commended

CLASS 38.—SHE GOATS (QUALIFIED AS "STAR OR 'Q' STAR MILKERS")—Continued.

486 Didgemere Dream	Feb. 17, 1923 202 April 13. 188	Even. 6.1 6.2	6 15	3.74 8.00 11.74 0.230	4 6	0 · 492	1.968	2 25 8 4 3 888	1.0	54	4	94	2nd Prize Reserve for BaronessBuidett Coutts Cup Res for Tremedda Selene ('up and Reserve for
4 Didg	Feb. 1 2 2 Apr	Моги. 5·9 6·3	12.2	3·11 7·91 11·02 0 19	8 8	0.48	1.92	2188.8	46	76	61	26	and Prize for Barone Coutts Cur Fremedd (up and R
Number	Born I live weight, in Ibs Last Kidded Days since Kidding	Weight of Milk, 1st day Weight of Milk, 2nd day	Total	Percentage Fat Composition of Solids other than Fat the Milk. Trotal Solids Actual weight of Fat, in Ibs.	Calculation of Points multiply by 20	Actual weight of Solids other than Fat, in lbs	Calculation of Points multiply by 4	For weight of Milk (lbs.) For weight of Fat (lbs. × 20) For weight of Solds other than Fat (lbs. × 4)	Total Points for Milk Deductions	TOTAL POINTS GAINED FOR MILK	Points for time since Kidding .	TOTAL POINTS GAINED .	Remarks and Awards

CLASS 39.—SHE GOATS (NOT ELIGIBLE FOR CLASS 38).

Number		450 Cornish Petulance,	Brei W	451 Brenda of Weald.	468 Didgeme Deher	468 Didgemere Delia,	A Dudge Dulk	469 Dadgemere Dukette,	482 Cornsh Quill.	482 Cornish Quill.	487 Didgemere Dogtose,	7 mere ose.
Born Live weight, in 11ss Last Kidded Däys since Kidding	Mar	March 1, 1925. 107 July 21. 89	March 1 Mar	March 8, 1921. 111 March 12. 220	March 1, 1921 155 May 1. 170	1, 1921. 15 7 1. 0	April 6, 1923 172 April 4.	April 6, 1923. 172 April 4. 197	Feb 12, 1925, 108 108 July 16, 94	5 12, 1925. 108 July 16. 94	March 1, 1924. 162 June 8, 132	1924.
Weight of Milk, 1st day Veight of Milk, 2nd day	Motn 3 5 3.8	n. Even. 3 3.6 3 3.8	Morn. 3.5 3.2	Even. 3 1 2·9	Morn. 4.5 4.2	Even. 4 0 3 9	Morn. 5 6 5 2	Even. 5 0 5 3	Morn.	Even. 2 9 3 · 5	Moin. 5.9 6.2	Eyen, 5 6 5.5
Total	7.3	3 7.4	6.7	0 9	8.7	6.7	10.8	10.3	2.9	6.4	12.1	11.1
Average	3.65	35 3.7	3.35	3.0	4.35	3.95	5 4	5.15	3.35	31.50	6.05	5.55
Percentage Frai	4.08 8.76 12.84 0.15	18 4·71 76 9·25 34 13·96 5 0·174	5.42 9.28 14.70 0.18	5.73 8.95 14.68 0.172	3·11 8 29 11·40 0·135	4·10 8 66 12·76 0·162	3 26 8 32 11 58 0 · 175	8:42 12:06 12:06	88 21 12 88 10 14	5·14 8·84 13 98	3.17 8.25 11.42	3.72 8.20 11 92
Calculation of Points multiply by 20	3.0	3.48	3.6	3.44	2.70	3.24	3.50	4 36	8.1	82.88		4.12
Actual weight of Solids other than Fat, in lbs	0.32	12 0 342	0.31	0.268	0.36	0.343	0.45	0.435	0 29	0.283	0.50	0.455
Calculation of Points multiply by 4	1.28	1.368	1.24	1.072	1 44	1.372	1.80	1 740	1.16	1 132	0.1	1.820
For weight of Milk (lbs.) For weight of Fat (lbs. $\times$ 20) For weight of Solids other than Fat (lbs. $\times$ 4)		7.35 6.48 2.648	97.2	6 35 7·04 2 312	φ.c. 61	8 3 5 · 94 2 812	10 7 3	55 54 54	998	6.55 6.08 2.292	11.6 7.92 3.82	352
Total Points for Milk Deductions		16.48	15	15.70	17.05	05	21 · 95	.95	14.92	95	23.34	34
TOTAL POINTS GAINED FOR MILK		16.48	15	15.70	17.05	05	21	95	14.92	92	23.34	34
Points for time since Kidding		8 0	8	3.0	2 ]	1	ė1	2.6	6.0	6	1.5	2
TOTAL, POINTS GAINED		17.28	18	18 70	19 15	15	24	55	15	82	24.84	#
Remarks and Awards	-		Rese Hi <sub>1</sub> Comm	Reserve and Highly Commended.	3rd Prize,	rize.	2nd 1	2nd Prize.			1st Prize.	rize.

## THE DAIRY SHOW BUTTER TESTS OF 1926.

By R. H. Evans, B.Sc.

THE Prizes in the Butter Tests were awarded according to the following scale of points:—

One point for every ounce of butter: one point for every completed 10 days since calving (calculated to the first day of the Show), deducting the first 40 days. Maximum allowance for period of lactation, 12 points.

Fraction of ounces of butter, and incomplete periods of less than 10 days to be worked out in decimals, and added to the total points.

In the case of cows obtaining the same number of points, the prize to be awarded to the cow that has been longest time in milk.

A Certificate, giving the last day of calving (which must be before 9 a.m. on October 5th), must reach the Secretary by Saturday, October 9th.

No prize will be awarded to animals in the Butter Tests, which do not come up to the following standard:—

Bre	l.		Cows under 5 years.	Cows 5 years and over.
Pedigree Shorth Non-Pedigree Sl British Friesian: Lincolnshire Re Jerseys Guernseys Ayrshires Red Polls South Devons Kernes Dexters Devons Welsh Blacks Blue Albions	rthorns	rthorns	30 30 30 27 27 30 30 26 26	Points. 34 34 34 34 35 30 30 30 34 34 29 29 30 30 30 34

Certificates of Merit and Highly Commended Cards will be given to animals, other than Prize Winners, that reach the above standard.

The tota	l number	of	entries	and	$_{ m the}$	actual	number	tested	at	$_{ m the}$
1926 Show :-										

		1	
Breed	Number entered	Number tested.	
Pedigree Shorthorns Non-Pedigree Shorthorns Lincolnshire Red Shorthorns British Friesians South Devons Darry South Devons Devons Red Polls Blue Albions Welsh Blacks Ayrshires Guernseys Jerseys Kerries Dexters	29 9 10 36 8 4 4 28 6 3 38 21 39 8 3	18 5 4 25 1 0 0 1 17 4 1 26 14 25 5 3 3 149	

The number of Shorthorns tested this year shows an increase of two on the 1925 figure. Of the 27 animals competing in this class 12 yielded over two pounds of butter in the 24 hours. The average yield of butter in this class amounted to 1 lb.  $15\frac{1}{4}$  ozs.—an increase of  $3\frac{3}{4}$  ozs. on the 1925 results.

The premier award in the Shorthorn Class went to Mr. S. Reading's "Langford Damsel 21st"—a Lincoln Red Shorthorn—with a yield of 3 lbs. 10 ozs. of butter, this being the highest amount of butter obtained from an individual cow at the 1926 Dairy Show. Mr. A. B. Croxton's "Spot" was awarded the Second Prize with a yield of 2 lbs. 15½ ozs. The Third Prize was won by Mr. R. Tustian's "Greattew Blossom," and the Fourth award by Messrs. Allen & Rogers' "Grand Duchess Oxford 30th," with yields of 2 lbs. 11½ ozs. and 2 lbs. 9¾ ozs. respectively.

The average yield of the four Lincolnshire Red Shorthorns tested amounted to 2 lbs.  $8\frac{1}{2}$  ozs.—a very creditable performance.

The number of Friesians tested—25—shows an increase of six over the 1925 figure. Three of this number yielded over 3 lbs. of butter each, and 13 others exceeded the 2 lb. mark. The highest yield registered in this class was 3 lbs.  $8\frac{1}{4}$  ozs. by "Muntham Troublesome," the property of Messrs. W. G. White & Sons. The Second Prize went to "Lavenham Seabreeze"—a cow from Messrs. Strutt & Parker Farms, Ltd.—with a yield of 3 lbs. 4 ozs. The Third Prize was won by "Lavenham Wallen 2nd" from the same herd, with a yield of 3 lbs.  $0\frac{1}{4}$  ozs. Mr. F. Sykes' "Kingswood Ceres Daisy"—with a yield of 2 lbs.  $4\frac{1}{4}$  ozs., and 10-9 lactation points was awarded the Fourth Prize.

Only one South Devon put in an appearance, viz., "Milkmaid 9th," the property of Mr. W. Hunt, Tracey's Farm, Totnes. Her yield of butter amounted to 3 lbs. 2½ ozs.

Mr. W. D. Chick's Devon cow, "Lovely 4th," yielded 2 lbs.  $3\frac{3}{4}$  ozs. of butter, thus qualifying for the £3 prize.

In the Red Poll Class 17 cows competed—an increase of 11 on the 1925 figure. The average yield in this class amounted to 1 lb. 11 ozs.—practically the same as that at the previous Show. The premier honours went to Mr. T. H. Sochon's "Tendring Floss 34th"—her yield amounting to 2 lbs. 12 ozs. The Second Prize was won by Mr. J. G. Gray's "Seven Springs Bessy," with a yield of 1 lb. 14½ ozs., having been 124 days in milk, thus gaining 8·4 points for lactation. The Third Prize was carried by Major J. A. Morrison's heifer, "Basildon Russett," with a yield of 1 lb. 12¾ ozs., having been 134 days in milk—her lactation points amounting to 9·4. Twelve of the 17 Red Polls tested failed to reach the standard points for the breed.

Of the four Blue Albions competing, Mr. A. Gillett's cow, "Brampton Jewel," was awarded the £3 prize, and Lt.-Col. W. E. Harrison's "Burton Clara," the £2 prize. The average yield of butter in this class amounted to 1 lb.  $14\frac{1}{4}$  ozs.

Only one Welsh Black animal competed—Mr. J. B. Jones' "Bryncian Handy 6th"—and as the cow reached the standard for the breed, she was awarded the £3 prize.

There were five less Ayrshires tested at the 1926 Show than was the case in 1925. Of the 25 animals competing only five failed to reach the standard for the breed. Eighteen of the 25 yielded over 2 lbs. of butter in 24 hours, four of them yielding 3 lbs. or over.

Mr. J. Cochrane's cow, "Byreholm Buntie," won the premier award, with a yield of 3 lbs.  $2\frac{3}{4}$  ozs. The Second Prize was won by Sir T. Fowell Buxton's cow "Catlinns Belinda," her yield amounting to 3 lbs.  $2\frac{1}{2}$  ozs., while Mrs. Mackay's cow, "Bruchag Pearl," with a yield of 3 lbs. took the Third place. Mr. D. Wallace's "Auchenbrain Buntie 44th" also yielded 3 lbs. of butter, but owing to Mrs. Mackay's cow having been a longer time in milk, she was awarded the Third Prize. The average yield of butter in this class amounted to 2 lbs. 4 ozs. —a substantial increase on the 1925 figure of 1 lb.  $14\frac{3}{4}$  ozs.

The number of Guernseys tested at the 1926 Show showed a decrease of four on the 1925 figure. Six of the 14 cows competing in this class failed to reach the standard for the breed. The average yield for the class amounted to 1 lb. 11 ozs., as compared with 1 lb. 8 ozs. at the 1925 Show.

The premier award in the Guernsey Class was awarded to the Misses Hargreaves' cow, "Lemon Gadfly," with a yield of 3 lbs.  $4\frac{1}{4}$  ozs. of butter—quite a creditable performance. Mr. C. Norman's "Hadham Goldstream 11th" carried the Second Prize, her yield amounting to 2 lbs.  $7\frac{1}{2}$  ozs. This cow received in addition eight points for lactation. The Third Prize went to Mr. W. Dunkel's "Downe Fleur of Vimiera," with a yield of 2 lbs.  $3\frac{1}{4}$  ozs., and  $7\cdot4$  lactation points.

In the Jersey Class 25 cows competed. Ten of this number yielded 2 lbs. or over, the average yield for the breed amounting to 1 lb. 14 ozs. The First Prize was awarded to Mr. H. Cecil Pelly's "Mastermaid" with a yield of 2 lbs. 10 ozs., after being 201 days in milk, thus gaining the maximum of 12 points for lactation. This cow also won the National Butter Cup. The Second Prize was awarded to Mr. R. W. Carson's "Mastermans Golden Cidonia," with a yield of 2 lbs. 11½ ozs. butter, and 8.9 lactation points. Major A. W. Huntington's "Marriette's Violet" took the Third Prize, with a yield of 2 lbs. 7 ozs. of butter, and a maximum of 12 points for lactation. This cow was the Reserve for the National Butter Cup. Nine Jerseys competing failed to reach the standard for the breed.

Of the five Kerries tested, two failed to reach the standard points for the breed. Brig.-Gen. H. Palmer's "Coquet Gipsy" took the premier honours with a yield of 2 lbs. 1 oz., the Second Prize going to to Capt. N. Zambra's and Mr. C. Williamson's "Milne Hattingly Haughty," with a yield of 1 lb.  $14\frac{1}{2}$  ozs. Of the three Dexters tested, Mrs. H. P. May's cow, "Barbara," qualified for the £3 prize, her yield amounting to 1 lb.  $6\frac{1}{4}$  ozs. with the maximum of 12 points for lactation.

Twice and Thrice Milking.—The choice of milking twice or three times daily was an innovation at the 1926 Show, and of the 149 cows competing in the Butter Tests, 74 were milked three times, and 75 twice. The question as to whether those cows which are milked three times a day hold any advantage over those which are milked only twice a day is an interesting one. In the absence of sufficient data, it is premature to express any opinion on the matter. In the Shorthorn Class the First and Third awards were won by cows which were milked only twice daily, while the Second and Fourth Prizes were awarded to thrice milkers.

In both the Ayrshire and Friesian Classes practically all the animals were milked thrice daily, and all the awards in these two classes automatically went to thrice milkers.

In the Red Poll Class the First and Third awards were won by thrice milkers, while the Second Prize went to an animal milked only twice daily.

In the Guernsey Class the First and Second Prize winners were the only two cows which were milked three times a day.

In the Jersey Class the First and Third Prizes were awarded to twice milkers, and the Second Prize to a thrice a day milker.

Of 28 prizes awarded in the Butter Tests Section, 16 were won by thrice milkers, the remaining 12 going to twice milkers.

Trophies and Cups—in the awarding of which the Butter Test points were taken into consideration:—

		No.	Res.
Individual Championship Challenge Trophy		150	134
The "Morrison" Challenge Trophy		101	346
The Spencer Challenge Cup		150	208
The National Butter Challenge Cup		350	359
The Shorthorn Butter Challenge Cup		101	50
The South Devon Challenge Cup		208	
The Busk Perpetual Challenge Cup		225	****
The "Rowallan" Champion Cup		279	288
The "Stagenhoe" Challenge Cup		314	316
The "Nutt" Challenge Cup	• • •	420	419

My best thanks are due to my colleague, Mr. J. G. W. Stafford, and others who rendered me valuable assistance in the carrying out of the tests.

The following table shows the average results for all the breeds competing:—

Year.	Total No. of Cows.	Average weight of Animals.	Average No. of days in Mılk.	Average weight of 24 hours Milk.	Average yield of Butter.	Average Butter Ratio.	Average No. of Points.
1926	149	lbs. 1,160	64	lbs. 49·56	1b. ozs. 1 15½	26-69	34-68

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Shorthorns	1	#	12	17	22	26	56	1.9	22	97	30	97	02	50	÷1	30	33	68	34	18	15	ŝĩ
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TOTALS		195	44	64	89	61	65	19	62	55	54	62	45	54	94	111	173	187	143	148	154	149

Table II.—Number of Cattle of the various Breeds Tested since 1919, with their Average Period of Lactation, Weight of Butter, Butter Ratios, and Points.

Year.	No	Breed	Average No. of Days in Milk.	Average Weight of Butter.	Average Butter Ratio.	Average No of Points.
1919 1920 1921 1922 1923 1924 1925 1926	24 30 63 39 34 18 15 23	Shorthorns .  " " " " " " " " " " " " " " " " " "	34 34 29 30 57 343 40 43	lbs ozs 1 134 1 114 1 8 1 9 1 144 1 15 1 115 1 134	1bs. 24·35 25·43 30·25 30 75 26 01 25·54 27·60 27·05	28·82 27·91 24·20 25·68 32·59 31·95 28·46 31·01
1919 1920 1921 1922 1923 1924 1925 1926	4 4 7 7 7 9 8 10 4	Lancoln Reds	58 59 64 31½ 58 72¾ 39 31	1 13344 1 53444 1 13444 1 142 1 142 2 152 2 8	29 20 31 61 27 13 24 82 26 37 27 43 27 27 22 57	32 32 23 90 31 40 35 89 32 73 32 11 34 27 40 66
1919 1920 1921 1923 1924 1925	15 10 24 13 23 19 25	British Friesians  " " " " " " " " " " " " " " " " " "	28 50 85 57 65 57 45 52	1 10½ 1 13 2 3 1 10 1 11¼ 1 12 1 15 2 4¼	36 05 29 59 28 26 35 32 32 22 31 87 32 36 28 97	26·50 31·17 39·00 26 86 31·76 30·28 32·50 38·13
1921 . 1922 1923 1925 .	5 5 3 2 1	South Devous	777 555 36 111 88	1 141 1 13 2 34 2 84 3 2½	22·06 27·04 21 43 17·80 21·63	34·42 29·25 35·76 46·25 55·30
1925	1	Dairy South Devon .	124	2 41	18.90	44-90
1919 . 1920 . 1921 . 1922 1923 1924 1925	5 6 7 5 3 8 1	Devons	60 25 48 47½ 41 40¾ 51	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24·47 19·32 21·92 27·00 23·18 24·88 24·40 21·85	27.57 31.55 32.60 28.53 31.29 26.50 30.78 35.85
1919	11 12 17 23 13 17 6 17	Red Polis	49 61 68 59 57 76½ 63 60	1 8½ 1 5½ 1 9½ 1 3½ 1 9¾ 1 7½ 1 11½ 1 11½	30·03 31·46 24·73 34·09 26·67 25·79 28·70 27·13	26·02 23·66 27·52 21·75 28·00 24·96 30·20 29·47

Table II.—Number of Cattle of the various Breeds Tested since 1919, with their Average Period of Lactation, Weight of Butter, Butter Ratios, and Points—Continued.

Year.	No.		Breed.			Average No. of Days in Milk.	Average Weight of Butter.	Average Butter Ratio	Average No of Points.
1924 1925 1926	1 5 4	Blue Albio	ns	. ,		26 <u>1</u> 35 50	1bs ozs 1 151 2 01 1 141	lbs 23·34 28·70 31·16	31 · 63 33 · 11 32 · 16
1922 1925 . 1926	4 2 1	Welsh Blac	cks 		•	52 42 43	1 131 1 155 1 102	24 23 $21.60$ $26.72$	30 45 31 · 62 27 · 05
1921 . 1922 1923 . 1924 1925 1926	20 16 15 31 26	Ayrshires	· · ·	٠	-	39 32½ 29 27 33 35	2 5 1 104 1 14 2 04 1 14 2 33	20·15 31·92 23·88 22·65 26·60 24·66	37 20 32·18 30 35 32·40 31 60 36·61
1919 1920 1921 1922 1923 1924 1925 1926	16 14 19 15 10 16 18 14	Guernseys "" "" "" "" "" "" "" "" "" "" "" "" ""	:- : : :		Load and a familiary	80 82 82 52 66 84 100 100	1 73 1 84 1 88 1 103 1 9 1 8 1 11	$19.76 \\ 21.22 \\ 20.45 \\ 21.95 \\ 22.89 \\ 22.30 \\ 22.10 \\ 21.99$	$27 \cdot 16$ $28 \cdot 53$ $27 \cdot 47$ $27 \cdot 31$ $30 \cdot 13$ $29 \cdot 08$ $29 \cdot 41$ $32 \cdot 73$
1919 . 1920 1921 1922 1923 1924 1925		Jerseys "" "" "" "" "" ""				111 106 127 105 135 132 135 126	1 11½ 1 11 1 9½ 1 9½ 1 10 1 15½ 1 13½ 1 14	18.76 18.85 18.56 19.82 18.49 17.75 18.61 19.39	33·59 32·74 32·29 31·99 35·31 38·11 38·60 37·61
1919 1920 1921 1922 1923 1924 1925	4 8 17 13 7 10 7 5	Kerries				32 63 76 51 156 82 68 39	1 2½ 1 7 1 3¼ 1 1¼ 1 8¼ 1 5 1 10¼	27.66 22.81 23.16 29.33 24.60 26.90 24.58 25.13	18 · 71 25 · 77 22 · 43 19 · 34 29 · 74 24 · 42 34 · 65 26 · 82
1919 1920 1921 1922 1923 1924 1925	2 3	Dexters				129 112 153 143 150 78 118 102	0 154 0 124 0 11 0 134 0 135 1 754 1 54	23·48 21·78 24·33 25·82 25·20 23·01 25·40 27·97	23 · 84 19 · 21 22 · 30 21 · 73 23 · 56 20 · 35 29 · 22 25 · 56

TABLE III.—AVERAGE YIELD OF BUTTER OF THE DIFFERENT BREEDS AT DIFFERENT PERIODS.

Year         Breed         No. of Cows.         Days in Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Cows.         No. of Milk, Milk, Days in Milk, Sows.         No. of Milk, Milk, Days in Milk, Sows.         No. of Milk, Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Days in Milk, Sows.         No. of Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in Milk, Days in					****					
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1922		13	1 24	7	1 4	$\bar{2}$	1 14	ī	0 15
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\frac{1923}{1924}$	"	7	1 10	4 2	1 63	1	2 41	1 4	2 21
1926 , $10   1   10\frac{1}{2}   4   1   11\frac{3}{2}   2   1   13\frac{1}{2}   1   1   9$	1925		6	1 141	ĩ	1 10 2			1	1 10±
	1926	77	10	I 10½	4	1 112	2	1 131	1	1 9

Table III.—Average Yield of Butter of the Different Breeds at Different Periods—Continued.

-									-
Year.	Breed.	No. of Cows.	Days in Mılk, 50.	No. of Cows.	Days in Mılk, 100.	No. of Cows.	Days in Milk, 135.	No. of Cows.	Days in Milk, 190.
			lbs. ozs.		lbs. ozs		lbs. ozs.		lbs. ozs.
1924	Blue	3	1 151	1	1 15		_		_
1925	Albions	4	2 3	1	1 8	-	1 101		_
1926	77	3	1 144		_	1.	1 121	_	
1922	Welsh Blacks	2	1 143	2	1 43	-			_
1925 1926	"	$\frac{2}{1}$	1 15½ 1 10¾	_	=	_	_	_	
1921	Ayrshires	. 2	2 5				_		
1922 1923	"	16 14	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\frac{3}{2}$	1 23 1 84		=	1	1 23
1924 1925 1926	"	15 27 21	2 01 1 141 2 31	4 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2 71		
1020	,,,	21	2 32	1	2 72	1	2 12		
1919 1920	Guernseys	8 4	1 8½ 1 10	2 5	1 11 1 114	2 3	1 2½ 1 2½	<u>4</u> 1	1 74 1 2
1921 1922 1923	"	4 7 9 5 8 6	1 12 1 83 1 10½	ସ 5 5 3 3 9 9 5	1 5	2321133	1 21 1 71 1 55 2 1	41522392	1 74 1 2 1 7 1 7 1 7 1 10 1 8 1 8
1924 1925	77	8	1 83	2 2	1 114 1 94 1 54 1 57	3	$\begin{bmatrix} 2 & 1\frac{5}{4} \\ 1 & 6\frac{3}{4} \\ 1 & 10 \end{bmatrix}$	3	1 103
1926	,,	2	1 7½ 2 6½	5	1 5 7	4	1 131	2	1 8*
1919 1920	Jerseys	3	1 15½ 1 13½	8 4	1 7½ 1 11¾	4.	1 123 1 14 1 15	4	1 111
1921 1922	22	1 4	1 27 1 121	4 8 8 3 6	1 7134 1 1134 1 114 1 114 1 114	4 3 4 7 8 7	1 15	8 8	1 5½ 1 7½ 1 6¾
1923 1924 1925	"	3 6 1 4 1 2 4 2	1 101	3 6	1 111	8 7	1, 81 1, 91 1, 151	8 8 13 17 5 7	1 11½ 1 5½ 1 7½ 1 6% 1 10% 1 14 2 0% 1 15½
1926	19	2	1 13½ 2 0¾	5 7	2 1½ 1 11½	, 4 7	1 6 1 123	5 7	2 03 1 15½
1922	Kerries	7	1 21	5	1 1		_	1	0 12
1922 1923 1924	27	7 3 2 5 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 6	1 1 1 8 1 23	1 1	1 103 1 81	1 2 1	$\begin{array}{c c}1&23\\1&4\end{array}$
1925 1926	27 27	4	2 3 1 12‡	1	1 21		_		1 51
1922 1923	Dexters	1	0 12	2 1	0 13				
1923 1924 1925	, ,,	1 1 1 1	0 10 0 13½ 1 10½ 1 2¾	1	0 10	1	1 2	6	0 15
1926	"	i	1 10½ 1 2¾	1	1 31		=	$\frac{2}{1}$	1 3½ 1 6½

## TABLE IV.—Comparison of Churnings with Analyses.

## SHORTHORNS.

			1		
No in Catalogue.	Weight of Butter Churned	Total Fat by Analyses	No. in Catalogue.	Weight of Butter Churned.	Total Fat by Analyses.
2 11 12 17 18 19 24 25 27 28 37	1b5 OZS 73 3 4 1 2 1 1 1 2 1 1 3 1 1 1 1 2 1 1 3 1 1 1 1	lbs. ozs. 2 103 2 111 1 144 2 5 2 2 1 9 1 11 1 2 5 5 1 33 1 33	38 39 50 53 54 56 86 98 100 101 111 112	lbs   ozs.   1   8½   1   6   2   11½   2   9¾   0   15½   1   3½   4½   1   12½   2   15½   1   12½   1   1½   1   1½   1   1½   1   1½   1   1	lbs. ozs.   2
				42 13	45 04
		LINCOLN RED			
125 129	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{ccc} 2 & 6 \\ 1 & 6\frac{1}{2} \end{array}$	132 134	2 7 3 10	$\frac{2}{3}$ $\frac{4}{6\frac{1}{2}}$
				10 13	9 7
		BRITISH	FRIESIANS		
147 148 149 150 151 154 155 157 159 160 162	2 104 2 104 2 84 3 4 3 04 2 144 2 44 2 34 3 84 2 124 1 15	2 12 2 15½ 2 15½ 3 7 3 2½ 2 11½ 2 49 6 1 15 3 11½ 3 06	172 174 177 180 182 185 196 197 198	2 10 1 12± 2 6± 2 12± 2 1 1± 1 9± 1 0± 1 10±	2 12 1 14‡ 2 11 3 0 2 5 3 14 1 10 1 1‡ 1 11‡
				50 10½	53 151
		SOUTH	DEVON.		
208	3 2½	3 3½	_		man,
	I.	DE	von.	1	
225	2 33	2 43	_		

TABLE IV.—Comparison of Churnings with Analyses—Continued.

RED	POLLS

No. in Catalogue.	Weight of Butter Churned.	Total Fat by Analysis.	No. in Catalogue.	Weight of Butter Churned.	Total Fat by Analysis.
233 234 235 236 237 238 239 240 241	1bs. ozs. 1 7½ 1 1½ 2 12 1 5½ 1 12½ 1 12½ 1 12½ 1 13½ 1 9 1 13¾ 1 3	lbs. ozs. 1 14½ 1 15 2 12 2 6½ 1 14½ 1 10½ 1 10½ 1 12½ 1 12½ 1 8	243 245 247 251 254 255 258 260	1bs. ozs.  2 31 1 11 1 10 1 10 1 12 1 12 1 9 1 5 1 11 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	lbs. ozs.   2   2   2   1   10   1   11   1   1   1   1   1
		BLUE A	LBIONS		
261 266	$\begin{array}{ccc} 1 & 12\frac{1}{4} \\ 2 & 4\frac{1}{2} \end{array}$	1 11 2 6	267 269	$\begin{array}{ccc} 2 & 2 \\ 1 & 6 \end{array}$	2 53 1 31
				7 83	7 10
275	1 10}	1 10½			
275	1 10}	1 10½		_	
		AYRSI	HIRES.		
276 278 279 280 281 284 286 288 289 290 292 293 294	3 1 2 5 7 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	114444 144 144 144 144 144 144 144 144	296 299 300 302 303 305 306 307 308 309 310 311	2 3½ 2 11 2 12 2 11 2 13½ 1 10 2 2 1 1 10 2 2 1 1 10 2 1 1 2 11 2 1	2 5½ 2 9 2 1½ 2 13½ 1 11 1 11 1 13 2 1½ 2 2 1 18 1 18 1 18 1 18 1 18 1 18 1 18
				58 51	62 83
		GUERI	ISEYS.		THE SECTION OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE
314 316 317 318 321 323 327	3 41 2 75 1 31 2 34 1 8 1 41 1 114	3 85 3 4 4 4 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	328 329 331 332 333 334 340	1 134 1 108 1 884 1 884 1 224 1 62	1 81 1 152 1 72 1 72 1 72 1 101 1 1 1 7
				40 B	24 4½

TABLE IV.—Comparison of Churnings with Analysis—Continued.

## JERSEYS

No. in Catalogue.	Weight of E		al Fat by nalysis.	No m Catalogue.		of Butter		Fat by lysis.					
342 343 345 346 350 352 353 357 358 359 362 363 364	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	04 1 5 1 7 1 54 1	5. 025. 15 144 4 71 64 7 44 7 44 1 1 1 1 1 1 1 1 1 1 1 1 1 1	366 367 370 372 374 376 377 378 383 384 385 392	lbs 2 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1	025 11 14 81 131 12 14 11 11 11 11 11 11 11 11 11 11 11	10s. 2 1 1 1 1 1 1 1 1 1 1 0	ozs. 1 153 8 144 13 9 111 12 2 11 134 153					
a,		_	The annual section of		46	13}	45	9 <del>1</del>					
			KER	RIES.									
404 406 407	2 1 1 2	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 <u>1</u> 13 0 <del>1</del>	416 417	1 1	0 } 2 ½	1	0 2 <u>1</u>					
				1	8	31	8	7½					
	DEXTERS												
418 419	1 1	29 1 3 <u>1</u> 1	3½ 2½ 2½	420	1	61	1	71					
		ı			3	$12\frac{1}{2}$	3	131					

Table V.—Average Differences between Churnings and Chemical Analyses from 1919.

Year,		3	Breed.			i	Churn.	Analysis.
							Lbs. Butter.	Lbs. Fat.
1919	Shorthorns						43.86	42.40
1920	Shorthorns					1	51 25	52.57
1921	***					ì	94.84	$112 \cdot 69$
1922	"						61 · 26	71.69
1923	27					1	65 15	71 94
1924 1925	"	•				.	35·02 25·75	$\begin{array}{c} 36 \cdot 15 \\ 28 \ 81 \end{array}$
1926	"	• •	•				42 81	45.04
1919	Luncolnshi	e Red S	hortho	rns			7.47	7.15
1920	"	,,	,,			-	5 37	5 81
1921	,,	**	••				12.77	13 01
$1922 \\ 1923$	"	**	"		•	.	15 62 16 90	$14.96 \\ 19.72$
1923 1924	,,	**	"		• •		14 06	19 72 12 98
1925	37 49	"	"				20 89	21 62
1926	,,	,,	••				10 11	9 44
1919	British Fri	esians					3 31	3 33
1920	,,						$27 \cdot 10$	29 06
1921	"		•	••	•		21.81	25 18
$1922 \\ 1923$	**		•			.	38·37 22·92	$^{44}_{27 \cdot 32}$
1924	**			•			40.37	46 74
1925	,,,				,-		39.05	43.73
1926	"		•	•	•		50.65	53.97
1921	South Dev	ons					9.46	10.50
1922	**					•••	9.25	9.71
$1923 \\ 1925$	"		•	••	•	• •	6 · 62 39 · 04	$7 \cdot 13 \\ 4 \cdot 95$
1926	"		•	• •		• • •	3.16	3 20
1925	Dairy Sout	th Devor	ıs		•	•	2.28	2.31
1919	Devons						7.92	8 10
1920	27			••			3.94	3.59
$1921 \\ 1922$	,,	•		••	•••	••	11 · 58 11 · 69	$\substack{12\cdot73\\12\cdot72}$
1923	", …	••					9.51	9 88
1924	,,						4.97	5.76
1925	,, .				••	• • • •	14.64	16 02
1926	32	٠	•	••	•••		2.23	2.28
1919	Red Polls						16.71	18.83
1920	,,	••	• • • •				15.98	18.89
$1921 \\ 1922$	,,	••	• • • •	•	••		27·06 28·33	29.98
1922	"				٠	***	28·33 21·07	$35.61 \\ 24.15$
1924	27						25.12	28.36
1925	,,	••				]	10.28	13.04
1926	,,						$28 \cdot 75$	31.03

Table V.—Average Differences between Churnings and Chemical Analyses from 1919—Continued.

Year.			Breed.				Churn.	Analyses.
1924 1925	Blue Albion	s .			•		Lbs. Butter.  7.76  10.27	Lbs. Fat. 8 92 12·43
1922 1925 1926	Welsh Black	· · ·					$7 \cdot 30$ $3 \cdot 92$ $1 \cdot 67$	6 70 4·47 1 64
1921 1922 1923 1924 1925 1926	Ayrshires "" "" "" "" ""					-	4·62 27·85 30·19 30·52 59·47 58·34	4 · 69 31 · 52 32 · 95 35 · 15 65 · 36 62 · 52
1919 1920 1921 1922 1923 1924 1925	Guernseys "" "" "" "" "" "" "" "" "" "" "" "" ""	:.	  	:			21 · 23 28 · 94 22 · 46 16 · 80	23 · 66 21 · 62 28 · 87 23 · 14 16 · 78 25 · 60 28 · 51 24 · 28
1919 1920 1921 1922 1923 1924 1925 1926	Jerseys					· · · · · · · · · · · · · · · · · · ·	37 44 25 06 29 75 43 22 41 38 59 18 44 45 46 83	35·18 24·55 28·50 42·05 41·40 58·87 43·92 45·58
1919 1920 1921 1922 1923 1924 1925 1926	Kerries						4·66 11·50 18·78 14·14 10·81 13·11 18·66 8·21	4·64 11·48 21·96 13·57 *9·75 13·75 14·00 8·47
1919 1920 1921 1922 1923 1924 1925 1926	Dexters """ "" "" "" "" "" "" "" "" "" "" "" "					  	5.77 3.96 2.06 2.52 6.90 1.97 4.05 8.77	5·58 3·84 2·50 2·77 6·76 2·11 3·96 3·84

<sup>\*</sup> Does not include the fat of No. 466.

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Awards	H C. H.C H.C H.C. Srd Prize	
Total Zumber of	39 · 75 35 · 75 39 · 25 39 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30 · 25 30	
So of Points nortation	1 1 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1	
Zo. of Points for Buffer	25. 75. 75. 75. 75. 75. 75. 75. 75. 75. 7	
partition of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Fair   35     Fair   35     Uood   25     Eair   39     Good   18     V. Good   22     Good   24     C. Good   24     C. Good   24     C. Good   24     C. Good   25     C. Good   27     C. Good   27     C. Good   28     C. Good   27     C. Good   28     C. Good   27     C. Good   28     C. Good   28     C. Good   24     C. Good   25     C. Go	
Colour and Colour and Butter Training Villeno	P.de         Pair         19 75           Fain         Fair         35.75           Fan         Good         25 25           Good         Good         30 75           Good         Good         18 75           Good         CGood         18 75           CGood         CGood         18 75           CGood         CGood         18 75           CGood         CGood         19 00           CGood         CGood         26 00           CGood         CGood         24 50           CGood         CGood         22 50           CGood         CGood         22 50           CGood         CGood         22 50           CGood         CGood         22 50           CGood         CGood         22 50           CGood         CGood         22 50           CGood	
Ration, viz lbs.		-
Futter Yield	1 1 1 1 0 0 8 8 8 1 1 1 1 1 1 1 1 1 1 1	
	47. 25 26 25 27 37 44 43 27 27 37 37 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 44 43 27 47 44 43 27 47 47 47 47 47 47 47 47 47 47 47 47 47	-
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Milk Yield  Aft.   Eve	21 4 1 1 16 1 1 15 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_
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Alilk at synd to oz		
Date of last Call	Sept. 16 32 Sept. 29 19 Nuly 25 85 Sept. 17 31 Sept. 17 31 Sept. 25 54 May 24 147 Sept. 23 25 Sept 21 27 Sept. 25 23 Aug. 29 50 Sept. 29 26 Oct. 4 14	-
Date of Bhth	Dec. 15, 1920 Sept. 2, 1917 Jan. 13, 1920 Peb. 17, 1919 April 20, 1919 Oct. 4, 1920 Oct. 9, 1922 Jan. 30, 1922 July 4, 1922 July 4, 1922 Dec. 30, 1921 Oct. 5, 1922 Oct. 6, 1922 Oct. 7, 1922 Oct. 7, 1922 Oct. 7, 1922 Oct. 1922	
F Live Weight		
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Name of Anima	Thurnham  Barrington 4th Histon Wild  Longhills  Rosetto  Prime 4th Louic 7th  Louic 7th  Louic 7th  Louic 7th  Louic 8eraphina  Kingsthorpe Countess  Longhills Briar  Longhills Briar  Longhills Briar  Histon Lady  Aldenham  Aldenham  Aldenham  Aldenham  Aldenham  Rirklevington  Aldenham  Rirklevington  Woodnut  Balossom  Havington  Aldenham  Rirklevington  Aldenham  Rirklevington  Greattew  Blossom  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lavington  Lav	ă
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BUTTER TESTS—SHORTHORNS—Continued.

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† 	Awards	And the second second	4th Prize			н.с.		2nd Prize			н с.		H C.	1st Prize			
no to interior	uN lato oq	T	41.75	15.50	19.85	36 - 75	30 - 70	17.25	28.25	33.60	37 65	28.00	39.00	28 00			
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and ity tter	Lailty	ð	Good	Fair	Good	Good	Good	V. Good	Good	V. Good	V. Good 36.75	Good	Good	Good			
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rz., Ibs.	Ratio, 7	I	26.2	31.0	28 6	97 9	30.8	£.12	32.7	27.8	26.4	23 3	24.1	6 81			
Yield	Rutter	lbs ozs	2 93	153	1 34	2 43	1 12	2 154	1 124	1 14	21 24	1 13	r- ^1	3 10			
	Total	lbs.	68.5	30.1	34.3	64.1	54 0	63 7	6 29	52 0	2 09	40 7	58 9	68 4		-	
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Date of	last Calf	1926.	Sept. 21	Sept. 29	Sept. 2	Sept. 24	Aug. 12	Sept. 21	Sept 23	Aug. 3	Aug. 30	Sept. 9	Sept. 27	0ct. 1			
	Date of Birth		July 10, 1922	Mar. 30, 1924	Aug. 7,1923	1921	1919	Feb. 6, 1915	Unknown	1919	May 26, 1918	Aug. 29, 1922	Feb. 21, 1920	Oct. 9, 1921		-	-
	V 971.I ————	lbs	  315 <sub> </sub> J	900 X	1244 A	315	9011			324	1458 M	1460 A	536 F	347 0			
	Name of Animal	<u> </u>		Thelveton		Evensia 1315	Harrison 1.	Spot 1549	Sweet Pea 1378	Damsel 1324	Scothern Mystic 1.	Burton Vic 19th 1:	Burton Homes 44,	1st		un .	
	Exhibitor		Allen & Rogers	E. G. G. Frost	J. H. Ismay	Allen & Rogers	G. P. Hawkins	А. В. Стохоп	н. S. Horne	H. T. Holloway	B. G. Bowser	J. Evens & Son	J. Evens & Son	S. Reading	-		
ergolata	O ni .o)	N	54	99	86	86	100	101	111	112	125	129	132	134	Polician (Polician)		

BUTTER TESTS-SHORTHORNS-Continued.

,1			снив	CHURNING-TIME AND TEMPERATURE	ND TEMPERA	TURE	
No, in Cata-	Name of Animal		Time		N V T RANGEST N N TTT DIS MINISTER.	Тепрегатиге	7
90		Churning began	Churning finished	Duration of Churmng	Dairy	Cream and ('hurn	Buttermilk. when churning finished
			With the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	Minutes	Degrees	Degrees	Degrees
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25	Kingsthorne Countess Ruby 4th	9 11 "	10 15	64	9 4 0 7	21 21 20 42	<b>5</b> 5
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1	Awards	1	HC.	н.с.	H.C.	2nd Prize	3rd Prize	Disquali-	H.C.	н.с.	4th Prize	н.с.	1st Prize	н.с.		н.с.	Disquali-	Dall
to 19dn sta	ioV leto Poi	oT -	46.75	42 25	40.25	55 ±0	48 25	33 65	46.75	40 65	47 15	35 25	56.26	45 95	32 40	45 · 60	28.55	78 20
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Colour and Quality of Butter	Apuen	ð	Fair	Fair	Good	Fair	Good	Good	Fair	V. Good	Good	Fair	Fair	Good	Fan	Fair	Fair	Good
Colour and Quality of Butter	molo	3	Pale	Fair	Fair	Pale	Pale	Good	Faп	Ex.	Good	Fair	Good	Good	Pale	Good	Fair	Good
ız., Ibs. s. Butter	Ratio, v ilk to lb	I I	24.3	2.4.2	29 5	138 1	25 3	36.7	27 4	56.9	76 7	31 9	19 2	28.7	34.5	28 6	32.7	33 3
Yield	тэззиЯ	lbs ozs	2 103	2 104	3 8	3	3 04	1 144	2 143	2 13	₹† 61	2 34	3 84	$\frac{2}{124}$	1 15	$^{2}$ 10	1 54	1 123
	Total	lbs.	65.2	65.2	74.4	93.4	8.92	69.3	6.62	2 99	67.4	70 3	67.5	80 3	6 99	6 #1	43.6	59 4
Milk Yield	Even.	lbs.	19.8	20.0	25 2	31 1	F 76	21.2	26 7	18 1	55.3	22.5	24 3	28 0	21 9	25 6	12 0	19.7
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Alik ni sv		ON	80	155	34	44	33	7.4	59	1 109	149	17	33	55	54	46	113	<u>~</u>
Date of	last Calf	1926.	July 30	Sept. 23	Sept. 14	Sept. 4	Sept. 15	Aug. 5	Sept. 19	July 1	May 22 1	Sept. 27	Sept. 16	Aug. 27	Aug. 25	Sept. 2	June 27	Sept. 27
	Date of Birth		Nov. 22, 1917	Nov. 25, 1917	Mar. 25, 1917	Dec. 8, 1920	May 28, 1918	Dec. 16, 1920	Jan. 27, 1921	Aug. 11, 1918	Nov. 21, 1919	Jan. 8, 1919	June 12, 1919	Dec. 20, 1920	Oct. 1,1917	April £6, 1921	Mar. 20, 1922	June 30, 1922
eight	V 971J	Ibs.	1380	1468	1554	1490	1405	1623	1347	1587	1342	1328	1295	1375	1376	1451	1321	1498
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	Exhibitor		Lord Rayleigh	Lord Rayleigh	Lord Rayleigh	Strutt & Parker	Struct & Parker	Farms, Ltd. A. Weightman	J. Martin	Capt. J. Christie	F. Sykes	Gilbert &	W. G. White	& Sons W. Twentyman	W. Turner	C. W. H.	C. W. H.	C. W. H. Glossop
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1		r. Total	E		21.	- 58	- 53 - 53	8 76	-1- 	3	55	3 37	ay-make-maps   market					
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	Date of	last Calf	1926.	Aug. 11	Sept. 25	Sept. 22	Sept. 13	Sept. 21	Sept. 27	Sept. 25	Aug. 28	July 1						
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		Date of Birth		July 5	Sept. 16, 1922	Aug. 10, 1921	Ang. 14, 1921	Jan. 27, 1922	Sept. 25, 1923	Sept. 4, 1923	Jan. 13, 1924	Nov. 29, 1923						
	eight	W 9ViJ	Ds.		1372	1223	442	368	304	1315 8	1290	[494]		·····				-
		Name of Animal		Hamels Blegance 1237	Mapleton Grace		Bloem Reddown		Graceful Winchester		Angela Eynsford Trix	Iken Ceres Dairymaid	Anthrope Anthrope Primary		all validation and the second	4		_
		Exhibitor		E. Furness	F. Sykes	CorfleId	E. Hollingworth	W. H. R.	Gilbert fyman	W. & R. Wallace	W. Alexander	W. H. R. Gilbert						_
	\$10gue	eO ni .	οN	177	180	182	183	185	196	197	198	200						-

BUTTER TESTS—BRITISH FRIESIANS—Continued.

	re	Buttermilk, when churning fimshed	Degrees	C G G G G G G G G G G G G G G G G G G G
TURE .	Temperature	Cream and Churn	Degrees	ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්ස්
AND TEMPERA		Dairy	Degrees	00000000000000000000000000000000000000
CHURNING-TIME AND TEMPERATURE		Duration of Churning	Minutes	4 3 8 8 8 4 4 8 8 6 8 8 8 8 8 8 8 7 4 4 4 3 4 8 8 7 8 9 4 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
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	Name of Animal		Saham Leezie	Seven Springs		Hutton Apricot	<u>e</u> 6	Knepp Prudence 4th	Southdown		Basildon	Longford	Longford	Basildon Russett	Lydiate Ladd	Glevering	Basildon	Grauntcourts Tenderness
	Exhibitor	-	A. Preston Jones	J. G. Gray	T. H. Sochon	Mrs. M.	N. A. Heywood Lady Chesham	LtCol. Sir Merrik R.	Sart		W. Hill				W. R.	Giazebrook, Jun. N. A. Heywood	J. G. Gray	W. T. Dyer .
engolett	O ni .01	N	233	234	235	236	237	239	240	241	243	245	247	251	254	255	258	560

BUTTER TESTS-RED POLLS-Continued.

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30 3	Total Number of Points				99.75	38 60	41.40	39.55	37.00	37 00	48.00	47.10	42 00	44 75	50.75	38.25	37.40	43 00	34.75
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Milk Yield		Aft.		25.4	16 7	28.7	8.12	20.3	22.0	20.6	27.5	17.0	20.7	20.5	17 7	18.0	20.8	1.91	16.6
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		Date of Birth		April 28, 1921	20, 1922	3, 1911	19, 1916	April 11, 1919	5, 1921	5, 1920	-, 1917	5, 1922	3, 1921	28, 1920	10, 1920	14, 1923	25, 1919	Nov. 12, 1923	27, 1923
	ŗ	Date		April	Aug.	April	Feb.	April	Feb.	May	Jan,	April	Feb.	Oct.	Dec.	Feb.	Feb.	Nov.	Oct.
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man de mande en en en en en en en en en en en en en		Name of Animal		Catlinns Belinda 1166	Corsehill	Millantae	Shieldhill Topsy	Craigraploch Meadow Sweet	Rigg Rosie	Auchenbrain Duntie 4443.	Bruchag Pearl	Friendlesshead	Cargen Holm	Magueston Magueston	Byreholm	Byreholm Dismond	Staith Gowan 15	Ryemuir Clara	Byreholm Eliza
	77-11-11-17	Exminitor		Str T. Fowell	Sir T. Fowell	J. Johnstone	J. Johnstone	G. Dunlop	O. D. Maxted	D. Wajlace	Mrs. M. Mackay	A. W.	Major C. R.	J. Cochrane	J. Cochrane	J. Cochrane	J. & H. Gibson	M. Cochrane	J. Cochrane
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BUTTER TESTS-AYRSHIRES-Continued.

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Colour and Quality of Butter	Colour	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Fair	
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	Exhibitor	W. A. Thompson	W. A. Thompson	F. H. Sanderson	A. W.	A. W.	A. W.	Major C. R.		Major C. R. Dudgeon	O. D. Maxted	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
etalogue	302	303	305	306	307	308	300	310	311	313		

BUTTER TESTS-AYRSHIRES-Continued.

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# BUTTER TESTS-GUERNSEYS.

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Tright	V 9viJ	Ibs.	1178	1017	1050	1157	266	905	862	1001	8601	1026	885	891	847	820	 
	Name of Animal		Lemon Gadfly	Hadham		1	Cheminante of	Hockley Transcript	Jenny's Princess	Calchill Lizzie	Cunningham		Kitty's	Downe Princess	Calchill Quantic	Trewithen Poetry	
	Exhibitor		The 1	C. Norman	E. E. Palmer	W. Dunkels	A. Chester	Mrs. L. Co	E. E. Palmer	A. Chester	Major J. H.	Sir Eric Hambro	Sir Eric Hambro	Sir Eric Hambro	E. E. Palmer	G. H. Johnstone	
atalogue	O ai .oV	[	314	316	317	318	321	323	327	328	359	331	337	333	334	340	

BUTTER TESTS-GUERNSEYS-Continued.

	ده	Buttermilk, when churning finished	Degrees  4
ATURE	Temperature	Cream and Churn	Degree
ND TEMPER		Dairy	Degrees 55 25 25 25 25 25 25 25 25 25 25 25 25
CHURNING—TIME AND TEMPERATURE		Duration of Churning	Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minutes Minute
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BUTTER TESTS—JERSEYS.

Awards		* - ***********************************			H.C.			1st Prize	H.C.		н с.		31d Prize	н.с.	2nd Prize	н.с.	н.с.	H.C	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
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Date of	last Calf	1926.		Sept. 4	May 18	June 8	Aug. 3	Mar. 31	May 13	July 25	July 19	Sept 11	April 11	Aug. 7.	June 11	April 21	June 28	June 8	July 5
			9	6, 1920 j	26, 1918		15, 1920	19, 1920	12, 1920	, 1920	23, 1918	, 1917	23, 1917	. 1921		1, 1922	17, 1923	28, 1923	3, 1922
	Date of Birth			reb. o	Jan. 26	Mar. 10, 1918	Oct. 15	Jan, 19	Feb 12	Sept. 13, 1920	Mar. 23	Oct. 26,	July 23	June 11, 1921	June 18, 1920	Mar. 1	July 17	May 28	April 9
tdgie	N 97iJ	lls.		T US	886 J	738 3	894 C	888 3	895 T	804 8		977 C	911 J	923, J	117 J	873, 3	843 J	749 N	813 4
	Name of Animal			Windlesham				Star 2nd Mastermaid	Fontaines Lilac	Fair Margaret	Clairette 1111	Lily of the Valley	-	Violet Observer's Belle					Stella Mary Hollyhock of Hollywood
	Exhibitor			Hon, Alec F. Henderson	Sir G. Stanley	Wille, Bare.	G. Cross	H. Cecil Pelly	Mrs. Hayes	Sadler C. J. Phillips	E. Birkett	Mrs. Harry	Major A. W.	R. W. Carson	R. W. Carson	Col. L. Gisborne,	Sir Harold	Mackintosh C. J. Phillips	Sir G. Stanley White, Bt.
-ugolst	aO ni .o	N		342	343	345	346	350	352	353	357	358	359	362	363	364	366	367	370

BUTTER TESTS—JERSEYS—Continued.

Award		H.C.	H.C.	H.('.	Н С.	Н.С.	H.C.				
to tedmi	Total Nr	41.50	0 01	41.05	39 50	37.05	36.80	26.25	22.25	21.45	
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sinto.	T to . o.Y H 101	29.50 12	28.00 12	30 - 7	27.50 12	27 - 75	d 33 · 56	19.25	18.75	17.25	
r and lity utter	Quality	Good	Good	Good	Good	Fair	V. G00	Good	Good	Fair	
Colour and Quality of Butter	Colour	Farr	Fair	Fair	V. Good	Fair	V. Good V. Good 33 · 50	Good	Good	Fair	
.is. Ibs.	Ration, 7	18 6	12 22	÷ 55	111 22.5	21 1	12 18 2	0 15	1, 1	11 19.8	
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	Total	34.2	80.8	41.3	38 7	36.7	38.0	55 51	20.7	31·4	
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Milk Yleld	Aff.	1	ı	1	ı	1	8 51	1	1	ı	
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Date of	last Calf	April 28	Jan. 7	May 28	April 24 177	June 7	Апр. 6	June 30	Aug. 4	July 28	
		1022		23, 1921	6, 1923				29, 1924		entrateration deletera e employeda e a eleteration de la electrica de la electrica de la electrica de la electr
	Date of Birth	Jan. 19, 1922	Jan. 22, 1922	Oct. 23,	Mar. 6,	April 4, 1923	June 11, 1924	Aug. 16, 1923	Jan. 29,	June 30, 1924	
- jugis	W SVII 🖁	913	1013 J.	766 0	855 M	903 A	694 J	816 A	710 J	693 J	
		-		:	:		uline			zzle	
	Name of Animal	So Gay .	Postmistress	Tempete	Treasure 31d	Valse Brune 2nd	Countess Pauline	Prudence of	Nancy	Loseley Dazzle,	
	Exhibitor	1	Grosvenor Berry	Mrs. Harry	Major A. W.	_	Sir Harold			Miss E. A. Stange	
engolat	No. in Ca	372	374	376	377	878	383	384	385	392	

BUTTER TESTS—JERSEYS—Continued.

			CHUR	CHURNING—TIME AND TEMPERATURE	ND TEMPER	ATURE	
Name of	Name of Animal		Time			Temperature	
		Churning began	Churning finished	Duration of Churning	Dairy	Cream and Churn	Buttermilk, when churning finished
				Minutes	Degrees	Degrees	Degrees
Windlesham Windflower Ursame Belle Handleth's Queen Mastermand Mastermand Fontaines Lilae Filly of the Valley Mariette's Violet Observer's Belle Mastermans Golden Cidonia Clas Raleigh Spectre Lingen Sweet Thyme Stapleford Stella Mary Forthwisters Forthwisters Forthwisters Forthwisters Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempete Frempe	ver	8888888444446666666888888888844446666666	4 4 4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6	84894288584466448888888888888888888888888888	222222222222222222222222222222222222222		88 83 44 48 99 9 6 99 88 88 88 89 99 89 89 89 89 89 89 89

BUTTER TESTS-OTHER BREEDS.

							*				
Awards				£3 Prize	£3 Prize		£2 Prize	£3 Prize	H.C.		£3 Prize
mper of	uN lato oq	L		55.3	35.85	THE COLUMN TO S	36.15	36.50	34.00	22.00	27.05
Points nortst	No. of for Lac			4.8	Ħ.		7.9	I	ı		က္
Points	No. of for Bi			20 - 20	35.75		28.25	36.50	34.00	22.00	26.75
r and lity ıtter	uality	ð		Ex.	Good		Good	Fair	Fair	Fair	V. Good 26.75
Colour and Quality of Butter	Inolo	ລ		Ex.	V. Good		Fair	V Pale	Good	Good	Ex,
iz . Ibs.	Satio, v lk to lbs			21.5	21.6		124 31 .0	52.9	53.3	0.47	103 26.3
Yield	Butter	lbs ozs		65 65	3.1 2.2 4.4		1 124	2 44	01 01	9 1	1 102
	Total	lbs.		67.5	48 3		54.9	51 51	49 5	35.0	4 61
Milk Yield	Even.	lbs.		19.0	8 77		29 1	25 I	6.15	16 6	23 7
MIIK	Aft.	lbs.		73.4	I		1	1	1	1	1
	Morn.	lbs.		25.1	. 83 . 5		25.8	27.1	24.6	16.3	20 5
alilC ai e		·oX		88	41		21 119	11	40	25	43
Date of	last Calf	1926.		July 22	Sept. 7		June 21	Oct. 1	Sept. 8	Sept. 23	Sept. 5
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digie	Vive W			1566	1253		1442	1189	1332	1314	1124
	Name of Animal		and the second	Milkmaid 9th 1	Lovely 4th	en ang apananan ang apanan	Brampton Jewel 1189	Megdale Emma	Ridgewardine May	Bryncian Handy 6th	
	Exhibitor		SOUTH DEVON	W. Hunt	DEVON. W. D. Chick	BLUE ALBION	LtCol. W. E.	A. Gillett	J. W. Towler	A. Gillett	WELSH BLACK J. B. Jones
talogue	o, in Ca	N		308	225		197	997	267	569	275

BUTTER TESTS-OTHER BREEDS-Continued.

Awards				£3 Prize	н.с.	£2 Prize						£3 Prize		
nber of sin	tal Xun Pot	οT		33.00	30 20	32 75	16.75	21 ·1		18.75	23 · 70	34.25		
Points	to oX or Lac			I	1	I	1	5 0		I	4 2	12 0		
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Colou Qua of B	nolo	o		Good	Good	Pale	Fair	Good		23.1 Good	Good	Fair		
iz., Ibs.	Ratio, v	בונ בונכ		8 22	7 97 7	: :1	25.3	5. 5.		23.1	35 0	55.6		-
Zield	Butter	\$20		-	141	0	0	21	-	67	33.	<b>†</b> 9		
		Ę		- C1	~	21	- 9				-3	. 9	-	
	Total	B		57.4	49.8	45.3	36	27.0		27.0	45 3	35 (	-	 
Milk Yield	Even.	lbs		29 6	94.9	23 2	14.1	14.3		13.3	21.7	11.1		
Milk	Aft.	lbs.		1	1	ı		ı		-	1	8.51		
	Morn.	Ibs.		8.45	25.6	27.1	12 5	12 7		13.7	20 6	11.7	-	 
ye in Milk	of Day	oN		35	35	61 61	34	99		39	31	181		 -
Date of	last Calf	1926.		Sept. 13	Sept. 13	Sept. 25	Sept. 14	Ang. 13		Sept. 9	July 28	April 14 187		**************************************
	Date of Birth		THE STATE AND ADMINISTRATION OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF	May 12, 1917	Mar. 30, 1920	June, 1919	Sept. 1, 1923	Jan. 15, 1924	-	April 16, 1923	Mar. 15, 1919	1915		 Who and sometime
7dgi97	V 9viJ	lbs.	-	1003	1188	978	993	843		079	819	743	Here is no some	 ~~ .
	Name of Animal		w Alleis space	Coquet Gipsy 1003	Hattingley Haughty	Hattingley High Kick	Chaldon	Moonstone of Warren		æ	Just Fo	Barbara	bydigara	
	Exhibitor		KERRY	BrigGen. H.	Capt. N. Zambra & C. Williamson-	Capt. N. Zambra & C. Williamson-	B. W. A. Watney	B, W. A. Watney	DEXTER	Mrs. M. H.	T. A. Stephens	Mrs. H. P. May		
engolete	O ni .o	N		404	406	404	416	417		418	419	420		 

BUTTER TESTS-OTHER BREEDS-Continued.

AND A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE

# NEW INVENTIONS, DAIRY SHOW, 1926.

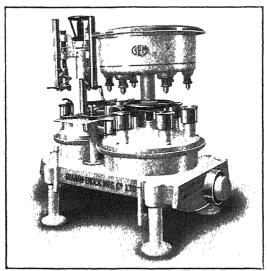
By J. GILLARD STAPLETON.

The number of entries in Classes 141 to 144, inclusive, this year at the Dairy Show embracing all those entries under the comprehensive title of Inventions, &c., were very numerous, numbering 76 in all. The increase in the entries in these classes of recent years is evidence of the vitality of the Dairy Industry at the present time, and the gradual improvement and development of methods for giving better service both with regard to production and distribution.

The Judges were considerably handicapped owing to the large number of entries and the short time available to examine them individually and in detail, and it is very desirable that entries for future shows should be required by the Council to be made much earlier and that the Judges be permitted to inspect entries, where they desire to do so, under working conditions before the opening of the Show.

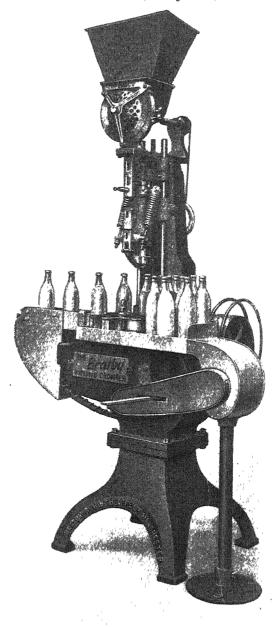
There are a few points in connection with some of the entries to which it is desirable to call attention.

Messrs. Bratby & Hinchliffe, Ltd., exhibited an improved Crown Corking Machine which was exceptionally rugged in construction and provided that in the event of a bottle falling over when passing on to the platform of the crowning head, the machine automatically stopped and thus prevented the breaking of the bottle and following bottles.



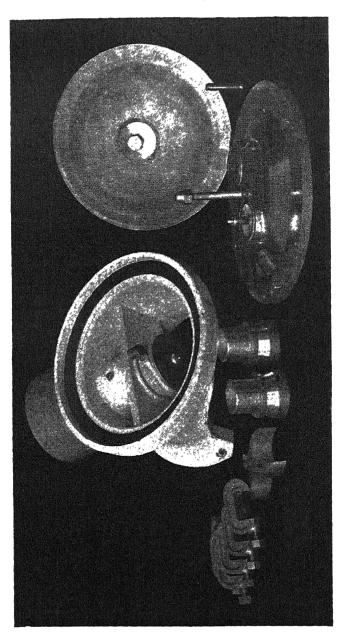
"G. E. M." ROTARY FILLER AND CAPPER.

Messrs. Graham Enock Manufacturing Co. again exhibited their very efficient and well-constructed "G.E.M." Filling Machine with



CROWN CORKING MACHINE.

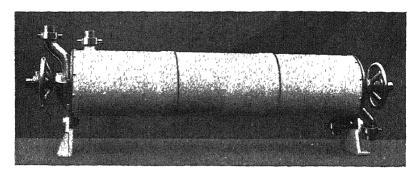




an improved method of lubrication which is entirely automatic and continuous.

There were two exhibits by Mr. R. L. Munday which could certainly be classed as new inventions. The first of these was a Sanitary Glandless Pump, which was of entirely new and ingenious design, capable of raising the milk to any desired height. The pump was constructed of two metal plates of about 16 inches diameter in close proximity to one another, and in the top plate were two metal valves for allowing the milk to pass in between the plates and out again. The lower plate was made to slightly pulsate by means of an eccentric rocking arm working against its underside, and this slight movement drew the milk through one valve in between the plates and again pressed it out through the other valve.

The other exhibit entered by Mr. Munday was a Heat Regenerator for raising or lowering the temperature of milk by means of water or brine thermostatically controlled. The principle of this apparatus was entirely new, and provided that the milk should be forced under pressure in a thin ribbon at high speed between a metal cylinder and a metal shield in very close proximity to the cylinder, and the heating or cooling medium was in contact with the metal on both sides of the thin ribbon of milk, thus giving positive heating and cooling at fixed temperature of the whole of the milk and in the absence of air, which is most important. Unfortunately there was no opportunity of testing the true efficiency of this machine.



HEAT REGENERATOR.

Messrs. G. Sutherland Thompson exhibited a most efficient Butter Moulding and Wrapping Machine, but owing to the very large number of working parts it is impossible to give a detailed description of its construction and working in these short notes.

The Wallis Crown Cork Co. were awarded a Silver Medal for their

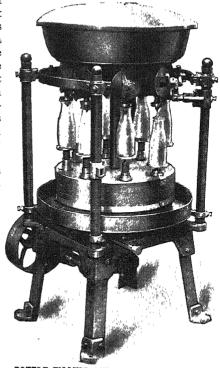


WALLIS SAFETY CAP SEAL.

"Wallis Safety Cap" Seal, which is a step in the right direction, as it certainly gives complete protection to the milk in the bottle from contamination of any kind or interference with the milk by the man who delivers it, also it is a very easy seal to remove from the bottle, and once off it cannot be replaced or another seal substituted as this could only be done by the sealing machine.

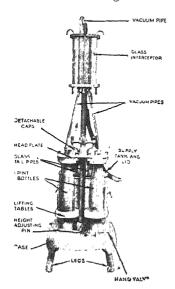
The Bottle Filling Machine, exhibited by Mr. Geo. S. Clayton and which was awarded a Bronze Medal, is constructed on lines which eliminate many of the undersirable features of most bottle fillers. The machine gives dead accurate measure, and the measuring cups could be stamped by the L.C.C. if necessary. The milk enters the measures free from froth, and this is accomplished by drawing the

milk into the measures from the bottom of the milk reservoir. The air passes from the measures up a tube which rises above the level of the milk in the tank. The measures are not immersed in the milk as in the case with other measuring machines and which is very objectionable on account of the leakage past the rising spindles in such machines, which gives excess quantities in the bottles after such machines have been in use a short time. The Clayton Filler also has an adjusting spring which keeps the sections of the measuring cups always close fitting and prevents loss of contents and consequent short measure. Another important feature of this machine is that in the event of a bottle falling over the machine automatically stops.



BOTTLE FILLING AND MEASURING MACHINE.

Milkfillers (Sales), Ltd., were awarded a Silver Medal for a very cleverly designed Milk Bottle Filler which worked on the Vacuum principle, the milk being sucked into the bottles at great speed giving dead accurate filling to a fixed point in the bottles, and any foam is



MILK BOTTLE FILLER.

immediately sucked up the tube connected with the air pump when the milk had risen to the "full" point, which was determined by the position of this tube. The foam is sucked into a glass reservoir where the air bubbles collapse and the milk runs back into the supply tank, which can be placed in any convenient position on the ground. The washing of this machine is one of its strong features apart from dead accurate filling and the removal of milk foam, as a washing solution can be continually circulated round and round the whole apparatus for any desired length of time, and this can be followed by clean hot water, so that it appears to be unnecessary to take the machine to pieces except for final steaming.

With one or two small improvements in themselves of no very great importance, this machine should command the serious attention of all

those responsible for bottling milk on a large scale.

The exhibit of Mr. Geo. S. Clayton, consisting of a small plant for Washing and Sterilizing Bottles, was a very efficient plant for a very small output, but not at all suitable for dealing with large quantities of bottles. This was awarded a Silver Medal in its class.

Messrs. Arthur Enock & Co., Ltd., were awarded the First Prize for a small Refrigerating Plant, but another year conditions relating to this Class should be published at a much earlier date.

# POULTRY SECTION—DAIRY SHOW, 1926.

By R. Fletcher Hearnshaw, F.Z.S.

Each year the Poultry Section of the Dairy Show grows in importance. The quality of the birds improves and the number of breeders who attend the event become more and more each year. Some pessimistic people said this year, on account of the General Strike and the Coal Strike, that the entries and the attendance would be less than usual, but this was not so, and the 1926 Show was one of the most successful in the long history of the Association, for whatever other shows exhibitors show at they feel they must show here, and whatever other shows they attend they feel they cannot miss the Dairy Show, for here one sees the pick of the season's breeding, and many people attend with the idea of buying either stock or show birds, and this fact was reflected in the sales for during the Show over one thousand pounds worth of live and dead poultry were sold, thus showing that people still have faith in the future prosperity of the poultry industry in this country.

To have received an entry of well over four thousand in this section is a fact that this Association can well be proud of, considering that late entries are never taken at this event, and that all entries

must be in before the official date for closing.

Mr. W. S. Brocklehurst is still the popular chairman of the committee, and he is well supported by active and practical men who work

hard to maintain the reputation of this successful Show.

Mr. R. Kirk, as chief steward in this section, again got through an enormous lot of work, and he was well supported by a lot of practical stewards, who got through their work in a most commendable style. Space is still limited, therefore it is impossible to increase the classification. It is well to mention this, for each year applications are received for the addition of new classes that it is impossible to find space for, therefore they have to be refused with regret. The thanks of the committee are due to the Judges in this section who are always most carefully selected, and this year did their duty very well indeed, in the majority of cases getting done in good time and giving general satisfaction. The Gold Medal for the Best Fowl in the Show was won by Miss N. Shank's Black Orpington pullet, a most typical good coloured bird, in fact it was like old times to find an Orpington taking Best in Show here again, but it was a very popular win and met with general approval.

Mr. B. Ravenscroft, assisted by Mr. F. J. Bull, carried out the secretarial duties in a manner that only past masters in this capacity can do, they had everything in splendid order.

Messrs. Spratts Patent, Limited, did the penning and feeding in their usual good style and tackled the work in a manner one would expect from a firm of such wide experience in these big events.

A new regulation of the London County Council that all baskets must be removed from beneath the pens and stacked apart from the Show added immensely to the task of unpacking and packing the birds. This is evidently a necessary precaution against fire, so it must be carried out; in fact one often wonders there are not more fires at poultry shows considering the careless way one sees matches and cigarette ends thrown about very frequently.

Miss M. H. Clay was not able to fill her engagement, owing to indisposition, to judge Rhode Island Red pullets, so these were taken

by Mr. Dyson, who also judged the cockerels.

Mr. H. Abbott not having returned from South America, his classes had to be taken by Mr. G. W. Barker.

Major J. A. Morrison, the popular President of the Association,

was, as usual, a big exhibitor in this section.

No classes were cancelled in this section this year. The sale of exhibits, as usual, took place in the old spot on the second morning of the Show, and Mr. Walters, as usual, was the auctioneer.

The attendance at the sale was good and in many cases the bidding was brisk, many birds changing hands and many more claimed during the duration of the Show. Many birds did not look at their best on the first day on account of the very cold weather and we heard of many birds and many people catching very nasty colds; in fact we never remember feeling the Agricultural Hall more cold or more draughty.

The demand for Buff Rocks was great, and Mr. John Taylor's First and Special cockerel was sold for £50, and Mr. J. H. Lamacraft's First Prize pullet catalogued at £25 made £30; so next season we shall probably find more people breeding this breed with the hope of

breeding equally good ones.

Then, as usual, the demand for Modern Game Bantams was good, the winning Black-red cockerel shown by Mr. Walter D. Trickett made £50; the winning pullet of the same variety, shown by Rougvie & Son, making £15; and the winning Birchin pullet, shown by Mr. T. H. Stretch, being a bargain for her new owner at £10 10s.

There was a good demand for Rhode Island Reds, White Wyandottes, Indian Game and Barred Rocks and anything else that was good and cheap. As usual, many Bantams were sold in the Selling Classes and many of these won at smaller shows later in the season. Mrs. Wykeham's White Turkey, the first prizewinner, made £5 15s.

Large numbers of other birds were sold during the Show at satisfactory prices to their owners, and no doubt this brisk demand is

why we see such good birds entered in the Selling Classes here, year after year, for the quality in these classes gets higher and higher and, therefore, more difficult to win.

The auction sale of the 223 exhibits in the Table Poultry was quite in keeping with the high standard of the exhibits, the average price being excellent. The top price was 105s, for the Gold Medal

winning White Wyandottes shown by Colonel II. Watts.

Other good prices for pairs were Mr. Thomas Sutton's First Prize Sussex cockerels 62s. 6d., Second Prize Dorking cockerels 60s., cross-bred Indian Game and Sussex cockerels 75s. the pair. Colonel H. Watts' cross-bred Indian Game and Sussex cockerels 60s. The 86 pairs of chickens in the open Table Classes, averaging 37s. per couple, was very good indeed.

The Table Poultry, as usual, made a great show and, owing to the big entry in cheese, it was found necessary to remove them from their usual home in the Gilbey Hall and to stage them upstairs near the Utility Poultry Section, and many people appreciated this, being able

to see the live and dead utility birds together.

There is always a good demand for really first class table poultry, and it is a pity that more good ones are not produced, for the table poultry industry in this country is one that should be encouraged in every way, so it is with that object in view that the committee always make a strong feature of this section at the Dairy Show. The class for pure bred Sussex cockerels contained 18, and that for pullets 14, and they were a very fine lot indeed to look at. The class for Petits Poussins had 10 entries. Indian Game Bantams should stand a good chance with their nice breast meat.

Eggs, as usual, were a very fine collection, the class for White having 25 entries, and that for Brown an equal number, whilst the Tinted came up well with a nice even lot of 24 entries.

The Dorkings, as usual, came first as one of our oldest breeds in the Exhibition Classes for Live Poultry, and they had an increased entry, the entries this year numbering 59 against 30 last year, which looks like a revival in this good old breed; the winning Dark pullet was a beauty and she took the Medal. Mr. Harold Corrie took first and second in the Any Other Colour Class with a very nice pair of Whites. The colour of the winning pullet was one we do not often see to-day, and it takes one's thoughts back to the beautiful ones shown by the late Mr. O. E. Cresswell.

The Croad Langshan Classes were very strong, both in numbers and quality, 64 entries being made in the two classes. The general improvement in this breed has been very great of recent years, but of all the points at the present moment there is the greatest room for improvement in the comb. Many of the birds, fine in quality otherwise, took lower positions owing to crooked combs in the pullets and too many serrations in the combs of the cockerels. Several birds were slightly whip-tailed instead of the required fan shape, and a few

lacked size, which is important in such a good table bird; in fact, this breed may well be described as a dual purpose breed as they are also good layers.

Brahmas had two dozen entries in four classes, not a great turn out. We have seen much better Lights shown here, especially in the cockerels. The Dark cockerels were young and undeveloped, so the oldest and most forward won; but the pullets, although few, were quite good.

Cochins were four less than last year, only 16 being entered, and Buffs won both classes. Some nice Blacks were also shown.

Sussex were again a wonderful section and seem to be as popular as ever, the two classes provided for Lights containing 130 birds, a show in themselves. Two new classes were put on this year for Buffs and they contained 34 nice birds, the pullets being better than the cockerels at present in this colour.

Speckled made two nice classes with 55 birds in them, the winners were very typical birds, especially the pullet, she was greatly admired.

Red Sussex came up well, and type and colour have both been much improved in this colour.

Brown Sussex, as usual, were not so numerous, and here, as usual, Mr. Charles Hardy won both classes and took the Special.

Wyandottes are always a strong section and this year they again came up well, the Whites, as usual, were the largest classes with 55 cockerels and 66 pullets, but we thought, taking them as a whole, that we have seen a much better lot of birds here in past years, but the winning cockerel, shown by Mr. John Wharton, was a beauty, and he took both the Silver Medal and the Special Prize.

The revival and the improvement seen in the Laced Varieties was well maintained, and the winning birds in both the Silvers and the Golds were very typical well-laced birds.

In Blacks 38 entries were received in the two classes, and the wonderful team of pullets shown by Mr. Roger Hargreaves made a clean sweep. The cockerels we did not think were such a good lot as usual.

Columbians, with 40 entries in two classes, still maintain their popularity because they have a very good specialist club to look after their interests, and egg output has always received the serious consideration of breeders of this breed.

Partridge Wyandottes had 25 entries in two classes, against 24 last year, but this breed always appeals to the breeder and the general public because of its beautiful colouring. The cockerels we thought a very moderate lot, but the pullets were a grand lot.

As usual, many bargains were to be found in the Wyandotte Selling Classes, and many birds were claimed here, the sales being especially brisk amongst the Whites.

Orpingtons had a nice entry, and the quality all round was good. Blacks were grand quality classes, the winning pullet being the Best Bird in the Show.

Whites had only 22 entries in two classes, but that was better than last year when the cockerels were cancelled and only 10 pullets shown. Buffs had an increased entry, as one would expect with Mr. W. J. Golding judging, the expert who in past years has bred so many winning Buffs. Blues do not make much headway and only 26 were entered in the two classes.

Rhode Island Reds are as popular as ever, especially the Single-combed ones, the cockerels having 89 entries and the 94, pullets such large classes teeming with quality being very difficult to judge.

On the whole they were not such a coarse lot as we have seen here; the Red men are now evidently thinking of utility properties, and we are not far from the day when the exhibition Red and the utility Red will be one and the same bird. We also noted the neater combs and less white in lobes than formerly. Colour in both sexes has wonderfully improved, also shape.

Mr. E. A. Cass was engaged at the last moment to take the Rhode Island Red Selling Classes, as otherwise it was thought that Mr. Fred Dyson in taking his own classes and Miss Glay's would have too much to do. The Rose-comb Reds had 38 entries in two classes, and at the moment they seem to be having a revival; they excelled in type, size and colour. We thought the pullet class contained many good birds.

Barnevelders are daily increasing in popularity, and they had 126 entries against 94 last year; this breed is very hardy and seems to thrive anywhere. In addition, the lovely brown eggs it lays are a great attraction, and the cockerels make very good table birds and the colouring of the breed is attractive to most people.

Anconas had an increased entry on last year and are always a popular variety, the quality throughout being very good. There was a general improvement in the quality of tipping and ground colour, especially in the cockerels. The winning pullet was very excellent in breed characters and fully developed, this being a breed that quickly matures.

Frizzles were a grand lot, and one would expect it with such a well-known breeder of the variety as Major G. T. Williams judging them. A Red cockerel won, followed by a nice pair of Whites. This is a breed that always attracts the attention of the casual visitor to poultry shows, and although quaint they are very hardy and easily bred and are splendid layers, in fact we wonder more people do not breed them.

Polish were only a shadow of the past, for the class provided for them could only muster six entries, White-crested Blacks doing all the winning. Old English Game came along in great numbers, the four classes containing 76 birds, which was a compliment to the popular Judge and breeder, Mr. H. Jones Robins, who is a great man for type and condition. Several chickens were not quite ready, but he went for the medium-sized clean cut bird. The winning Black-red cockerel was very bright in colour with good feet and legs, and the Medal-winning cockerel in the Any Other Colour was a really good Red Dun.

Minorcas showed a big increase in entries on last year, and the Judge selected the winners well, going for a more moderate bird than we have seen in recent past years, the tendency being to-day for much smaller lobes and combs; in fact, to get the breed more on utility lines again.

Andalusians had only 19 entries in two classes, and to-day seem to be falling away very much in popularity, so many new breeds having come along to take their place.

Leghorns are as popular as ever, and probably no breed has held its hold so long, or so consistently, in this country as Leghorns have. Whites as a whole this year were not perhaps quite so good as we have seen at this event in past years. We missed seeing Lord Dewar's fine team in this section, he not being able to show on account of his poultry manager being one of the Judges this year.

The Brown cockerels were a very even lot, somewhat better average quality than seen here for some time, although nothing really stood out. Brown pullets contained some wonderfully fine specimens and the quality was far above the average.

Black cockerels were not large in numbers, but the winners were birds of exceptional merit. The Black pullet class was possibly the best section for quality, the winner was well away, but then there were a large number of exceptionally fine specimens behind her; in fact, we do not remember seeing a better class.

Exchequers were far superior in quality to any we have seen at previous Shows, the winning cockerel being possibly the best ever staged.

The Any Other Colour Leghorn Classes contained a lot of wonderfully good specimens, and competition was very keen with 19 cockerels and 22 pullets entered, Duckwings standing first in both classes, although some nice Buffs, Piles and Blues were shown.

Rocks, as usual, were a very popular section, the six classes provided for them containing 136 entries, the Barred, as usual, were the strongest classes, the winning pullet in this colour taking the Silver Medal. Although she was quite young she looked most promising, and well deserved her position. The winning cockerel was a very forward chicken. Buffs were indeed a grand lot, and this was proved by both the winners being sold at big prices, the cockerel for £50, and the pullet for £30, after which we heard several breeders say they were going to breed exhibition Buffs, for evidently this is where the demand and

the money is, and to-day, without doubt, there is a tremendous demand for good Buff Rocks for both exhibition and utility purposes, and the laying strains are splendid layers and hardy—a good farmer's fowl.

The winners in the Any Other Colour Rock Classes were all Whites,

and they were a very nice lot of well grown chickens.

Sicilian Buttercups had a very poor entry, only 21 in two classes, against 42 the previous year. Evidently the interest in this variety in waning and there is not much improvement in the breed of recent years. In Golds a nice pullet won, and in the Any Other Colour a Brown cockerel, followed by a nice Duckwing pullet.

Silkies were very good in all three classes and some excellent specimens were penned; most of the birds were staged at a convenient height and in a splendid light. The winning White cock came from Scotland and he was a beautiful bird well shown, and the winning White hen from Wiltshire, thus showing how well the breed is distributed. In the Any Other Colour Silkie, Partridge hens were first and second, and a nice Black third. There is a tendency for this breed to get too heavy in crest, which must be avoided, and also they are inclined to get on the small side. We do want a bit of size in them. They are hardy, good layers and wonderful sitters, in fact, I know nothing to equal them for broody purposes and chicken rearing, either pure or crossed.

Indian Game are always two strong classes, and this year contained 62 good chickens, and we thought were well handled by the Judge. Mr. Richard Belcher won both classes, taking the Medal and Special with his cockerel. He was a rare shape, wide and low, excellent in colour, and well shown.

Campines had an entry equal to last year, and many fresh names were found amongst the winners, which is a healthy sign. The Silvers were the strongest classes in numbers, but the Golds were the best in quality. Some of the chickens were rather backward, but the very best quality was found in the Gold pullet class, the first five here being hard to separate; the winner got there for her wonderful tail. This breed lavs a big egg for the size of the bird, and plenty of them.

Salmon Faverolles had two classes with 33 entries, against 25 last year. This is a very pretty variety, but many people object to a feather-legged variety on account of it being inclined to get scaly legs.

Bresse had four classes provided this year with a much larger entry, which proves the popularity of this breed at the moment, in fact, we have never before seen such strong competition here. The quality as a whole was really good, especially in the Whites. The winning cockerel stood out for quality and type, but there is still room for improvement in putting the Whites down in good show condition. The Blacks were a nice even lot and there was very little to choose between the winners, but some of the birds were inclined to show purple sheen instead of green sheen on the feathers.

Any Other Variety Classes at this Show are always most interesting, and are probably the classes where one can learn most, for one usually finds something shown here that is not often seen at other shows. In the cockerels a beautiful Black Hamburgh won with a nice head and plenty of feather; second was a tall Modern Langshan; and third a typical beautifully barred Scots Grey, a breed that is very hardy and one that is becoming more popular at the moment.

The pullets were a nice class of 20 entries, and here a Modern Brown-red Game, of grand shape and reach and lovely colour, won. Next being a nice Modern Langshan, and third a beautiful Scots Grey.

Breeding Pens always make an attractive section, and shown as they are in trios, they look very pretty. The class for Rocks, Wyandottes or Orpingtons was won by a lovely trio of White Wyandottes, well shown.

The Any Other Variety Class was won by a typical trio of Indian Game. They also took the Silver Medal and were claimed at catalogue price £45.

The Selling Classes received good entries throughout and many real bargains were found in them, in fact, at no show is more attention paid to looking through the Selling Classes than here.

Waterfowl, as usual, had an extended classification and received a good entry and made a nice display.

Rouens came first with 15 entries against 16 last year. For beauty and colouring of plumage they appeal to everyone, but like all good things the best are rather difficult to produce, the winning drake and the winning duck being two lovely birds.

Aylesburys had a nice entry of 31 in two classes, and here the winners had nice size, deep keels and good bills.

Indian Runners had six classes and they were well filled. In Fawns, many birds of great merit were to be found, but many of them might have been shown in better condition. White Runners have made great strides, the improvement in head being especially noticeable here. In general condition, however, the Whites were better than the Fawns. Breeders of Fawns must pay more attention to the body shape, and aim at a more uniform rotundity of body with increased length. If this is done there is no reason why the Whites should not in a short time equal the Fawns in general appearance.

Buff Orpington ducks had 40 entries against 31 last year, and have much improved in both type and colour, the winners excelling in these points and were well shown.

Magpie ducks, as a new variety, had only one class with 12 entries. They do not seem to be making much headway.

The Black East Indian or Any Ornamental Variety was interesting, first and second going to Black East Indians, and third to a very pretty Mandarin of nice colour in good feather.

Khaki Campbells seem popular at the moment and had a good

entry of 40. The winning drake was a strong bird, in good condition and of nice even colour. The winning duck was a bird of nice type with a beautiful head.

Any Other Variety Duck Class was an interesting one with 17 entries. Here the winner was a nice white Crested of good size and colour; second a nice Pekin drake of good colour; and third a nice Cayuga.

Geese were small classes, only 11 entries in both against 21 last year, but the quality was excellent and several were sold.

Turkeys had 55 entries in four classes against 72 last year, which was a big falling off. The competition, as usual, was very keen, and a high standard of type and quality was well maintained.

Utility is always a strong section, but this year with the same seven classes provided there was a falling off in entries, only 412 being entered against 431 last year. It is pleasing to note that breeders are at last beginning to realise the necessity of breeding for more size and better type, hence constitutional vigour naturally follows. There is a limit, however, to size in the breeding of Utility poultry if one wishes to retain the laying qualities which all Utility men, of course, must have as their chief aim, and certainly many of the White Wyandottes here had got beyond that limit, thus exhibiting coarseness and too much feather, resembling very much the outcasts of pure exhibition strains, but, taking the class as a whole, there were some very fine specimens, and the winners and carded birds were of the medium class for size, combining type and quality of feather, sharp alert heads, nice bone and silky texture.

White Leghorns were a fine average lot taking them all through, some of course not being in laying condition and others exhibiting coarseness, but very few small birds. The winners and carded birds were a fine lot of upstanding birds with good legs, long deep bodies, good broad backs, sharp and alert in head, with good eyes and silky in texture.

Black Leghorns were a fine average lot taking them all through, but they failed chiefly in leg colour, there being only about three birds with really good legs in the class. The winners were remarkably good bodied birds with good heads.

Australorps, with 22 entries against 24 last year made a nice show, although they do not seem to become much more popular as a Utility breed, still they are nice to look at and suitable for town runs.

Rhode Island Reds had a good entry, the competition was keen and the quality excellent, the entry being only four less than last year. One noticed considerable improvement in colour and type.

Light Sussex in Utility had 65 entries against 83 last year. This breed is very popular now all over the country. The winning pullet here received the Medal for the Best Utility Bird and was claimed at catalogue price £5, at which price she seemed to be a bargain.

Any Other Variety Utility is always interesting as one does find

a great variety entered, and a useful Black Minorca pullet headed this class, a nice Red Sussex being second, and a nice Ancona third.

Bantams are always a strong feature of this section and this year proved no exception to the rule, for we found a wonderful collection. Modern Game had an increased entry which was a compliment to Mr. J. H. Carré, who came all the way from Guernsey to judge them. The Black-reds, as usual, had the largest entry and the winners in both classes were claimed at catalogue price.

Piles came next and the entry was good, but the quality all round was not so good as we have often seen here.

Duckwings followed and they were indeed a grand lot, but they were penned in rather a bad light. In the Any Other Colour, Birchins took all the Money prizes, the Silver Medal for the Best Modern Game Bantam going to the winning Black-red cockerel.

Old English Game Bantams made a good show and some very typical birds were shown in good condition. Wheaten hens were excellent, and the winner took the Medal. She was of nice shape and colour with good legs and feet.

Variety Bantam's made a nice display, the Silver Medal for the Best cock going to the winning Silver Sebright, and he deserved it, the same bird winning at Birmingham Show shortly afterwards, and the Silver Medal for the Best hen went to a nice shaped well-pencilled Partridge Wyandotte that easily won her own class.

Black Rose-combs made a nice show with an entry of 31 in two classes. Minorcas and Pekins seem to have lost their popularity, and both had decreased entries on last year. Sebrights are still very popular and had a good entry.

Japanese were a well filled good quality class. Frizzles came up well. Polish cocks were not a good lot, but the hens we thought were one of the best lot we have ever seen at this Show.

Wyandotte Bantams seem to become more popular every year, the Whites, as usual, having the largest two classes, and the Partridge a big increase on last year's entry, which shows they are becoming more popular. Belgian Bantams and Hamburghs do not seem to make much headway. Indian Game Bantams made two nice classes with 25 entries in the two. Probably the two most interesting classes were the Any Other Variety for Bantams, and these two classes had 31 entries, and in each class Scots Grey Bantams stood first, a Black Leghorn on the big side was second in cocks, and third a nice White Rose-comb. The second hen was a lovely Dorking Bantam, and a nice Jubilee third.

The five Bantam Selling Classes had an entry of 65 birds and many real bargains were found in these classes, many birds being claimed in them during the duration of the Show, in which case, after the auction is over on the Wednesday morning, the first claimant takes the bird.

# PIGEON SECTION-DAIRY SHOW, 1926.

By W. S. BROCKLEHURST, J.P.

The forty-eight Annual Show was held on October 19th, 20th, 21st, and 22nd, 1926, at the Royal Agricultural Hall, London, and was again a great success, not only as regards numbers and quality of the exhibits on view at the Show, but also as regards the attendance which was greatly in excess of last year, and the receipts were well above those of last year. The entries in the Pigeon Section were 86 up on last year's Show, and 152 entries more than two years ago. The figures for the last three years Shows are as follows: in 1924, 3,028; in 1925, 3,094; in 1926, 3,180, which number is about as many birds as can be staged with any comfort owing to the very limited space available for the Pigeon Section, which has long been a source of concern to the Committee, and complaints from exhibitors, who still, notwithstanding all their complaints, make a good entry year after year, showing that notwithstanding the unavoidable lack of space to stage the pigeons better, the Dairy Show is a fixture that all pigeon fanciers are anxious to see their birds in the pens, and how they compare with their fellow breeders.

That the Pigeon Section has lost none of its interest with the general public was noticeable by the large number of the public who passed through the aisles each day of the Show and asked to be shown the winners of the medals and different cups offered by the British Dairy Farmers' Association and other Specialist Clubs for competition each year. This year owing to the new rules of the National Pigeon Association and Marking Conference coming into force, that all pigeons shown must wear the proper ring as issued by the National Pigeon Association, with the exception of the breeds in the Variety Pigeon Club which are exempt until 1928, many good birds had to be passed over as they had no rings on; also several birds that had not been properly transferred to their new owners had to forfeit their prize money as they were not eligible to compete under the new rules of the National Pigeon Association. It is to be hoped that exhibitors will not make these mistakes next year when showing at the Dairy and other Shows which are held under N.P.A. rules.

The winners of the principal trophies offered by the Association for competition this year are as follows:—

The Association's Gold Medal for the Best Pigeon in the Show bred in 1926, was awarded to Class 3, Pen 36, Mr. F. H. Jarvis' White Fantail cock. The Reserve going to Class 181, Pen 2089, Mr. W. E. Horsfall's Yellow Jacobin.

The Jones' Memorial Trophy for the Best Adult bird in the Show was awarded to Class 38, Pen 433, Mr. F. Meyer's grand yearling Carrier cock which also won the Carrier Club's Challenge Cup for Best Adult Carrier and the Association's Bronze Medal for the Best Carrier in the Show. The Reserve going to Class 47, Pen 543, Mr. G. Sugden's Barb cock.

The Esquilant Challenge Trophy for the Best Young bird in Section No. 4, Dragoon, Antwerp, Show Homer, Exhibition Flying Homer and Racing Pigeon, was awarded to Class 213, Pen 2428, Mr. J. H. Smith's Antwerp cock, and the Reserve going to Class 221, Pen 2518, Mr. T. Adams' Show Homer.

The Fulton Challenge Trophy for the Best Young bird bred in Section No. 1, Pouters, Pigmy Pouters, Norwich Croppers, and Carriers, was awarded to Class 16, Pen 173, Mr. A. T. Jupe's young Pouter hen, and the Reserve was awarded to Class 27, Pen 292, Mr. J. L. N. Cutt's White Pigmy Pouter.

The birds winning these much sought after trophies were wonderful specimens of the different breeds, and the competition gets keener and keener each year, and the owners are to be congratulated in having successfully bred and shown a bird of such merit, good enough to be able to carry off one of the above trophies, in such a grand company of birds as is seen each year in the Dairy Show pens. Details of the various varieties are as follows:—

Fantails numbered only 142 entries in 12 classes, as compared with 173 entries in the same number of classes at last year's Show. The classes on the whole were good in quality and up to the usual high standard, though the Saddles were disappointing. The winner of the Association's Gold Medal for the best young bird bred in 1926 was found in this section and fell to Mr. F. H. Jarvis' young White cock, Class 3, Pen 36, a bird of correct type and size.

Pouters numbered 36 in the four classes, as compared with 26 in the same number of classes last year, an increase of 10, which is the largest number that has been seen at the Dairy Show for some years. The birds penned were of good type and quality. The young classes were very good especially the young hen class in which the competition was very keen throughout, and Mr. A. T. Jupe is to be congratulated on securing the Fulton Trophy with his grand young hen, Class 16, Pen 173.

Pigmy Pouters.—This variety showed a slight decrease on last

year's total, there being 141 entries in 13 classes, as compared with 148 in the same number of classes last year, but if the entries were less this year the quality of the birds penned was better, and showed a good improvement in type. In the old Adult Blue, Silver and Blush Classes the quality was very good and competition very keen; in the Hen Class, in particular, the standard of merit was very high, there being one or two very good old hens shown. In the young classes the hens were the better lot, and I am sure the Judge had a job to sort out the winners in the 17 entries in the Young Blue or Silver hens. I don't think a better lot of young hens has been seen together for some time. In the Young Black Cocks Class there were quite a nice lot of birds of exceptional type and merit, but the young hens were a poor lot with the exception of the winner which stood away from the others. As a class they were a disappointing lot. It was amongst the Young Whites, Mr. J. L. N. Cutt's Pen 292, Class 27, that the Reserve for the Fulton Trophy was found.

Norwich Croppers had an entry of 87 in six classes, as compared with 79 entries in the same number of classes last year, but not coming up to the wonderful entries in 1924 of 96 entries in five classes. The classes this year well averaged and the quality throughout was very good, and the birds were shown in better condition than is usually the case at this time of the year.

Carriers numbered 80 in seven classes, as compared with 66 in the same number of classes last year, an increase of 14. The quality is still improving, and the birds are not showing quite so much of the Barb skull seen in the last few years, I am pleased to say. The Jones' Memorial Trophy for the Best Adult Pigeon in the Show was awarded to Mr. F. Meyer's grand yearling cock, Class 38, Pen 433. The same bird also winning the Association's Bronze Medal for the Best Carrier in the Show. It certainly is a grand Carrier of wonderful type, carriage and texture of wattle. I regret to have to mention that in this section all the awards have to be altered in Classes 39, 40, 41 and 42, owing to the disqualification of Pen 408 in Class 36, and are as follows:...

- Class 39. -1st, Pen 441, F. Meyer; 2nd, Pen 445, F. Meyer; 3rd, Pen 444, Cooper Bros.; Reserve, Pen 447, S. Robson.
- Class 40. 1st and Cup, Pen 457, F. Meyer; 2nd, Pen 459, S. Robson; 3rd, Pen 461, F. Meyer; Reserve, Pen 462, A. Taylor.
- Class 41.—1st, Pen 463, S. Robson; 2nd, Pen 469, F. Meyer; 3rd, Pen 465, F. Meyer; Reserve, Pen 471, A. J. Warwick.
- Class 42.—1st, Pen 476, Cooper Bros.; 2nd, Pen 481, Cooper Bros.; 3rd, Pen 472, Cooper Bros.; Reserve, Pen 484, C. S. Palmer.

Holle Croppers.—These classes were introduced at the Dairy Show last year for the first time, when there was an entry of 45 birds in three classes. This year another class was added which increased the

total by 10 only, there being 55 in the four classes. They were a good lot taking them all through, showing that they are going ahead well, but we are sorry to see that several birds were marked as being entered in the wrong class. There seems to have been some misunderstanding by the Judges and exhibitors as to the meaning of the wording of several of the classes as to which are barred birds and not barred birds. It is to be hoped that the Holle Cropper Club will come to an understanding as to what they are going to term barred, and not barred birds. It caused a lot of comment at the Show this year amongst exhibitors and public alike.

Barbs had one more class this year; these in all making a total of 26 only as against 16 in two classes last year. Some nice quality and type of birds were on view, and it is pleasing to see so few of the heavily fleshed, watery-eyed birds being shown now. They are fast dying out and the nice clean sized ones taking their place in the prize list.

The Reserve for the Jones' Trophy was found in Mr. G. Sugden's Adult cock and true typed pigeon.

Dragoons.—This variety was easily the largest section in the Show and turned up in large numbers again, only being eight short of last year's entry, there being 420 in 32 classes, as compared with 428 in the same number of classes in 1925. The Judges report on the Adults and Yearlings is as follows:—I have little to comment upon except the quality of the birds penned. All the 20 classes except the two for Whites contained birds of undoubted merit, and I was pleased to notice that all the leading Dragoon fanciers were represented by their best birds. Speaking as an exhibitor who attended the Show last year, I should say the quality was decidedly improved upon. I was disappointed that several classes that usually fill well had poor entries, and that the total was about half-a-dozen down on last year, possibly this can be accounted for by the late moulting season that all fanciers are complaining of.

The report on the Young Bird Classes is as follows:—The 1926 bred birds were a grand lot of birds, in fact, I consider they were the best that have been shown for some years, and the classes were well filled, especially the Reds and Yellows which have much improved, it being a record for this colour. I was sorry not to see more Red Chequers, but at the same time pleased to see a few new breeders of this colour, and the breeders must look to the beaks as they are getting on the fine side. Taking the Dragoon Section all through, they were a grand lot and shown in grand condition despite the late and bad moulting season experienced by most breeders.

The winners of the Dragoon Club Challenge Cups are as follows:— The George Cotton Challenge Cup for the Best Cock bred in the current year was awarded to Mr. W. Bastard's Blue Chequer cock, Class 71, Pen 801, and also the Association's Silver Medal for Best Young Cock. The George Cotton Challenge Cup for the Best Hen bred in the current year was awarded to Mr. J. Russell's Blue Chequer hen, Class 77, Pen 926.

The Hewitt Challenge Cup for the Best White Dragoon bred in the current year was awarded to Mr. E. C. Hollebone's White Young hen, Class 81, Pen 978.

Short-faced Tumblers.—In this section 64 entries in five classes made a slight increase of seven on last year's total of 54 in the same number of classes, and with the exception of the Almond Adult Hen Class the others were well filled, and the birds showed a great improvement on former years as to true type and condition. Mr. T. Grindley carried off the Association's Bronze Medal with a grand little Almond shown in grand form and condition and wins well.

Long-faced Tumblers.—Self section had a splendid entry of 229 entries in 16 classes, as compared with 236 in 1925, seven less. The Black and Red entries were an exceptionally good and even lot, the competition in the Reds has been increasing for some time now and is very keen. The quality of both the Blacks and Reds has improved very much, and the young classes in both colours were a very even lot and took a lot of placing. Mr. W. R. Atherton winning the Association's Silver Medal with a grand young Black hen for the Best Young Self bred in the current year. The type that has been noticed, for some years now, to be improving, has been well maintained in the Blue, Silver and Chequers Classes, and the quality and type throughout all the Self Classes was very noticeable. We were sorry to see that the Chequered and Grizzle Classes were not better filled, and may be dropped if entries don't come up better another year, and the room given to other varieties.

In the Long-faced Tumblers, other Varieties Classes, the entries numbered 167 in 15 classes, as compared with 151 in 21 classes last year, with an increase of three classes. The entries only came up 16 in number, there being one or two classes which were very poor indeed, especially the Clean-legged Young Cock or Hen Class. The Black Baldhead Classes were a good lot and the quality was very good throughout. Mr. Herbert Pole's young Black Baldhead, Class 105, Pen 1313, winning the Association's Silver Medal—a grand young pigeon.

English Owls.—The entry this year was again an improvement on last year, there being 110 entries in nine classes, as compared with 82 in seven classes last year, and again the young classes were the best filled and the quality was exceptionally high, and the old birds were a very good lot and shown in good condition. The Yearling Classes though very good in type and quality were the worst filled classes, which was somewhat disappointing considering the number of very good youngsters seen last year. Messrs. W. B. McCombe & Son's, Class 124, Pen 1509, were the winners of the very handsome

Gatty Perpetual Challenge Cup awarded for the Best Young Bird bred in the current year.

African Owls.—This section of the Show is by far the worst in the Show and gets worse each year, there being only 20 entries in four classes, as compared with 34 entries in six classes in 1925. The Committee having been asked to increase the classes that year from two to six, but owing to the very bad response from African Owl breeders they were reduced to four classes. Thus it looks as if the African Owl Section will have to be left out of the Schedule in next year's list of classes, as not only is there no response in entries but no competition, as out of the twenty entries this year there were only four of them that did not belong to the same exhibitor. It looks as if the African Owl Fancy is done.

The winner of the Gatty Perpetual Challenge Cup for the Best Young Bird bred in the current year was won by Mr. Watmough, Pen 1565, Class 128, a nice typed and quality young pigeon.

Turbits showed a big decrease of 28 entries on last year's entries of 80 in eight classes, there being only 55 entries in the eight classes. This section is also very poorly supported and the Committee may think fit to reduce the classification very considerably next year. One or two birds stood out well from the rest, which were all round very good birds—one being Mr. W. R. Lobb's young cock that was awarded the Association's Bronze Medal for the Best Young Bird bred in 1926.

Archangels numbered 55 entries in four classes, as compared with 41 in the same number of classes last year, an increase of 14. The Young Classes were a wonderful lot again, many birds showing great promise to come, but not ready at the time of the Show.

The Association's Bronze Medal for Best Young Bird was awarded to Pen 1666, Class 141, Mr. E. A. Newberry's young cock, a grand pigeon with plenty of lustre all through.

Modenas came up well with grand entries of 354 in 34 classes, as compared with 329 in the same number of classes last year, an increase of 25. The total being made up of 207 Gazzi in 18 classes, and 147 Schietti in 16 classes. The entries in the Schietti Classes being the same as last year with the exception of one less, there being an increase in the Gazzi Classes which were well up to the usual standard for type, style and quality. The Blues have much improved in Bar colour of late, and the Reds are beginning to show more type and shortness of feather, a great improvement all round. In the Schietti Classes several good birds of correct type were to be seen in the Blue Barred and Black Self Classes, and the lacing on the Red Laced and Argents has improved very much, as has also the general type in these colours.

The winners of the Modena Club Challenge Cups and Association's Silver Medals are as follows:—

Cup for the best Old Gazzi Cock, Class 147, Pen 1748, Mr. A. C. Tattersall's Black cock.

- Cup for the Best Old Gazzi Hen, Class 152, Pen 1801, Mr. A. C. Tattersall's Tricolour hen.
- Cup for the Best Old Schietti Cock, Class 173, Pen 2011, Mr. W. F. Holmes' Magnani cock.
- Cup for the Best Old Schietti Hen, Class 168, Pen 1964, Mr. A. C. Tattersall's Red Laced hen.
- Cup for the Best Young Gazzi Cock, Class 145, Pen 1711, Mr. A. E. Sharp's Blue cock.
- Cup for the Best Young Gazzi Hen, Class 146, Pen 1728, Mr. W. S. Brocklehurst's Blue hen.
- Cup for the Best Young Schietti Cock, Class 165, Pen 1933, Mr. W. F. Holmes' Blue cock.
- Cup for the Best Young Schietti Hen, Class 166, Pen 1941, Mr. A. T. Wright's Silver hen.

The Association's Silver Medal for the Best Gazzi bred in 1926 was awarded to Mr. A. E. Sharp, Class 145, Pen 1711, Blue cock.

The Association's Silver Medal for the Best Schietti bred in 1926 was awarded to Mr. W. F. Holmes, Class 165, Pen 1933, Blue cock.

Jacobins.—Numbered 63 entries in six classes, three more than in last year's six classes, which is a slight improvement, but through the classes have much improved since 1924, when there were only 13 entries left after two classes had to be cancelled. We should like to see a greater number of this charming pigeon on view at the Dairy Show. It was rather surprising to see them turn up so well this year when one hears on all sides of the late moulting season, because this variety is very much affected by same, and it is always said amongst the Jacobin fanciers that the Dairy Show is too early for their birds. The birds seen at this year's Show were put down in very good condition, and the quality was very good all through. And the Reserve for the Association's Gold Medal for the Best Young Birds in the Show was found in Mr. W. E. Horsfall's Grand young Yellow, which also carried off the Association's Bronze Medal for best Jacobin.

Nuns numbered 68 entries in five classes, a decrease of 13 on last year's entry in the same number of classes. This variety was well represented in all classes, and the winning birds were very typical of the breed and the Best Adult and 1926 birds were both found in the A.O.C. Class, showing that the blacks are not improving as much as the other colours. The Dun hens made great progress, are now showing much more type and quality, and it is a noteworthy fact that the winner of the Association's Bronze Medal for Best Bird went to Mr. J. W. Neal's grand young Dun hen, Class 186, Pen 2152.

Oriental Frills came up well with 146 entries in 14 classes, as compared with 112 entries in the same number of classes last year, an increase of 34 entries, which is very pleasing, as this section is, I

am sorry to say, often very badly supported by the Frill breeders. This charming variety of pigeon was well represented in both quality and type, and the wonderful balance of type, lacing and markings of most of the birds shown, was very noticeable. The Association's Silver Medal for the Best Young Oriental Frill was awarded to Mr. Charles Hall's young Blondinette.

Magpies numbered 63 entries in six classes, an increase of 12 on last year's entries in the same number of classes. The quality and type of this variety is much improving, and that we are coming back to the beautiful slender, stately Magpie of some years ago, was the opinion of most breeders of this variety, I was pleased to hear. The Association's Bronze Medal for Best Young Magpie was awarded to Messrs. Wm. Martin & Son's young Yellow cock.

Mathams had the usual one class that brought together 11 entries one less than last year. Here, again, the quality was improving, and the birds were filing down a lot to what used to be seen in the show pens.

Antwerps numbered 53 entries in six classes, as compared with 42 entries in the same number of classes last year, an increase of 11 entries, but not quite up to the number of previous years. They all came up well in number and quality. The winners in both Adult Classes leaving little to be desired. Mr. Jupe's Adult cock was in lovely condition and was easily the best Adult in this section. The quality of the Yearlings was exceptionally good, and the three winners in both classes being of exceptional merit.

In the young birds again the quality was of the best. Mr. J. H. Smith's young Mealy cock standing out conspicuously, and won with ease. The Association's Bronze Medal for Best Young Antwerp, Class 213, Pen 2428, was also an easy winner of the Esquilant Challenge Trophy in Section No. 4 amongst the following birds bred in 1926:—Dragoons, Antwerps, Show Homers, Exhibition Flying Homers and Racing Homers.

Show Homers numbered 145 in 12 classes, as compared with 152 entries in the same number of classes last year, a drop of seven. The Adult Classes were not so well filled this year as last, but they were well up to the average for quality and contained many really good pigeons. The entries in the Young Classes were better than in previous years, and were a grand lot taking them all through, and the birds were put down in splendid condition. Mr. T. Adams' young cock, Class 221, Pen 2518, to whom the Association's Silver Medal was awarded was Reserve, and a close runner up for the Esquilant Challenge Trophy winner. The United Show Homer Club's Perpetual Challenge Trophy for Best Show Homer, any age, was awarded to Mr. J. W. Swan's Adult cock, Class 219, Pen 2496.

Racing Pigeons numbered 259 entries in six classes, an increase

of three entries in the same number of classes as last year. I will here quote the Judge's report on this section:--

Considering the depressed state of trade an entry of 259 birds in six classes must, I think, be regarded as very satisfactory, and the quality of the exhibits was well up to the standard of recent years.

Occasionally a year brings along one or two birds of absolutely outstanding merit, and if there were none such at the Show just concluding, the winner of the Cup for Best Bird, was well deserving of the award, and it was a striking circumstance that the three pigeons, each winner in its own class, from which I eventually selected this Cup Winner, all proved to be the property of the same owner.

A very satisfactory circumstance was the entire absence from the exhibits of birds showing any trace of the Exhibition Homer type, and apparently fanciers are now realising that such a type has no chance at the hands of a racing Judge. The birds shown were, indeed, simply handsome specimens of genuine racing pigeons such as are successful in our long distance races, and this is as it ought to be. One is perhaps scarcely justified in critisising the classification which succeeds in attracting an average of 43 entries in six classes, but I hope I shall live to see the day when there are separate classes for cocks and hens flown 200 miles and 100 miles respectively.

The winners of the three Cups kindly given by Lt.-Col. A. II. Osman, are as follows:—

The Victory No. 2 Challenge Cup, for the Best Racing Pigeon was awarded to Mr. H. T. Stratton's Young cock, Class 228, Pen 2642.

The Cup for the Best Young Racing Pigeon was awarded to Mr. H. T. Stratton's Young cock, Class 228, Pen 2642, and also carried off the Association's Silver Medal.

The Cup for the Best Old Racing Pigeon was awarded to Mr. H. T. Stratton's Young hen, Class 230, Pen 2734.

I am sure Mr. Stratton is to be congratulated on his wonderful success this year.

Exhibition Flying Homers. This section is going down as compared with a few years ago. Each year sees a reduction in entries, this year there being 65 entries in six classes, as compared with 97 in the same number of classes in 1924, but the birds penned compared fairly well with those of previous years, and Any Other Colour Classes came up far better than was expected, and these bid fair to excel the harder colours in both number and quality. The Association's Bronze Medal for the Best Exhibition Flying Homer was awarded to Messrs. Brooke & Wolstenholme's Young cock, Class 237, Pen 2891.

Genuine Homers.—The four classes given again for this variety brought together 37 entries, as compared with 47 in the same number of classes last year. The quality throughout was good and a great improvement is being made to get a uniform type into the birds.

Ptarmigans.—Two classes were again provided for this breed and brought together an entry of 22, as compared with 26 entries last year, a slight decrease. The quality was very good and the type much improved.

Ice.—The one class had 11 entries, an increase on last year of four; the colour of this charming bird was much more uniform and very excellent.

Swifts.—This one class had an entry of 10, the same as last year; the birds were shown in wonderful condition, and the colouring is certainly most beautiful, and they caused much attention from the public.

Strassers.—Eleven entries in the one class; several colours in this variety are now to be seen and much admired, and the type and condition of the birds shown was very good indeed.

Swallows.—This class was put in for the first time and brought together an entry of 12 very charming pigeons, and certainly the Tiger Swallow shown by Messrs. W. Illingworth & Son is a most wonderful pigeon, and caused a lot of talk amongst fanciers as well as the public. The condition of these birds was also wonderful.

The Any Other Variety, English or Foreign Toy Class was an additional class this year, and brought together a good entry of 20 birds, in which were seen a wonderful collection of birds shown in faultless condition, and much admired. It was in this class that the Association's Bronze Medal Winner was found for this section in Mr. H. Whitley's Pen 3031, Class 249.

Runts.—In this class only 14 entries turned up, as compared with 16 last year. This class seems to be on the decrease every year now, and although the majority of the birds showed an improvement in quality, they are deteriorating in size; a great point in a Table Pigeon.

Mondains, Carneaux, or Maltese Class had two classes this year for the first time and had an entry of 20. Both the classes were made up of only Mondains and Maltese and were an excellent lot, and I think the Committee might do well next year to put on separate classes for these two most excellent table pigeon breeds.

The Any Other Variety Class was reduced to one this year, and only had nine entries as, compared with 34 in two last year, that being due, no doubt, to the two other new Toy Classes appearing in the Catalogue this year for the first time. They were a most interesting lot and contained several new breeds to the English fanciers.

Selling Classes numbered eight, four at £4 and four at £2, and brought together a total of 102 entries, two less than last year, and nearly 40 less than in 1924. These classes contained some remarkably good birds, many of which were quite good enough for any open competition, many of the birds being classed; but it is surprising that not more change hands as the birds entered in these classes are generally

worth a good deal more than the price they are catalogued at, and the public don't take enough advantage of the chances offered to them.

In concluding my report on the 1926 Show which was again a great success, I should like to mention that I wish to thank my Assistant Steward, Mr. H. J. Heppell, and all the other Stewards for all the help and assistance so ably and willingly given on these occasions at the Agricultural Hall, London, and I sincerely trust and hope to the entire pleasure and satisfaction of all who exhibited, also those present at the 1926 Show.

I wish to thank all those good and true fanciers who acted as my Stewards and Assistant Stewards and gave their services voluntarily and so willingly, which is the most important thing in the running of a great show to a successful end.

I much appreciate the never failing help received from the Secretary and the Assistant Secretary and their staff at any time during the Show when required, and thus helping very much to lessen the hard work of the Dairy Show week.

# AWARD OF PRIZES, DAIRY SHOW, 1926.

## DAIRY COWS AND HEIFERS IN MILK.

- THE BRITISH DAIRY FARMERS' ASSOCIATION'S SUPREME INDIVIDUAL CHAMPIONSHIP CHALLENGE TROPHY, value 100 Guineas for the Cow gaming the greatest number of points on Inspection (as for the Spencer Cup) in the Milking Trials (provided the quality of the Milk analysed during the Test does not fall below 3 per cent. Fat, nor below 8.5 per cent. of non-fatty Solids at any Milking), and twice the number of points in the Butter Test taking only one Lactation awarded to Strutt and Parker Farms, Ltd., for "Lavenham Seabreeze" (British Friesian.)
- THE "BLEDISLOE" CHALLENGE TROPHY (presented by LORD BLEDISLOE, P.C., K.B.E.), awarded to the British Friesian Cattle Society for the Best Exhibit of good all-round Dairy Cows. The Cows competing for the Trophy were the first six in the Breed Milking Trials and were considered by the Inspection Judge to be typical specimens of the Breed.
- THE "THORNTON" CHALLENGE CUP (presented by Messis. JOHN THORNTON & CO.), for the Best Group of three Pedigree Shorthorn Cows and/or Heifers upon Inspection only, awarded to P. R. L. Savill for "Combebank Johnby," "Pearl 11th" and "Sweet Rosette 11th."
- THE "THORNTON" CHALLENGE CUP (presented by Messrs. JOHN THORNTON & CO.), for the Best Group of three Pedigree British Friesian Cows and/or Heifers upon Inspection only, awarded to E. Furness for "Hamels Foliage," "Hamels Grace" and "Hamels Flashlight."
- SPECIAL PRIZE of £10 (offered by Mr. ROBERT L. MOND, J.P.), and SECOND PRIZE of £5 (offered by the COUNTESS DE LA WARR), for Two Animals, the Progeny of any particular Bull, awarded respectively to J. Cochrane, for "Maqueston Mayflower" and "Brycholm Buntie" (Ayrshires). Major C. R. Dudgeon for "Cargen Holm Letty 7th," and "Cargen Holm White Stockings 11th" (Ayrshires).
- THE "MORRISON" CHALLENGE TROPHY, value 100 Guineas (presented by Major J. A. MORRISON, D.S.O.), for the Cow exhibited at three consecutive London Dairy Shows, gaining the greatest total number of points (at the three Shows) upon Inspection, in the Milking Trials and Butter Tests, awarded to A. B. Croxon, for "Spot" (Dairy Shorthorn).
- Class 1.—DAIRY SHORTHORN COW.—Entered in or eligible for Coates' Herd Book, or its pedigree sent for such entry previous to the Show, born on or previous to 1st August, 1921. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10) and quarter of Shorthorn Society's Prize (£10) to J. Pierpont Morgan for "Longhills Belle 2nd." Second Inspection Prize (£5) and Extra Inspection Prize (£5) to P R. L. Savill for "Combebank Johnby." Third Inspection Prize (£3) to P. R. L. Savill for "Pearl 11th." First Milking Trial Prize (£12) and quarter of Shorthorn Society's Prize (£10) to J. Chivers & Sons, Ltd..

- for "Histon Wild Queen." Second Milking Trial Prize (£6) to J. G. Peel for "Backwood Seraphma." Third Milking Trial Prize (£3 10s.) to E. Macintosh for "Louie 7th."
- Class 2.—Dairy Shorthorn Cow.—Entered in or eligible for Coates' Herd Book, or its pedigree sent for such entry previous to the Show, born after 1st August, 1921, and previous to 1st August, 1923.—First Inspection Prize (£5) and the "Calvert" (Challenge Cup and quarter of Shorthorn Society's Prize (£10) to L. Hignott for "Barrington Lucy." Second Inspection Prize (£3), to R. Tustian for "Greattew Swanee." Third Inspection Prize (£2) to P. R. L. Savill for "Odell Duchess." First Milking Trial Prize (£6) and the "Desborough" Cup to Allen and Rogers for "Grand Duchess Oxford 30th." Second Milking Trial Prize (£3 10s.) and quarter of Shorthorn Society's Prize (£10) to R. Tustian for "Greattew Blossom." Third Milking Trial Prize (£2 10s.) to E. A. Smith, for "Longhills Darlington 3rd."
- Class 3.—Dairy Shorthorn Heifer.—Entered in or eligible for Coates' Herd Book, born on or after 1st August, 1923.—First Inspection Prize (£5), Third Milking Trial Prize (£2 10s.) and the Shorthorn Society's Prize (£5) to P. R. L. Savill, for "Sweet Rosette 11th." Second Inspection Prize (£3), to G. P. Golden, for "Lady Mary 7th." Third Inspection Prize (£2), First Milking Trial Prize (£6) and the Shorthorn Society's Prize (£5) to J. H. Ismay, for "Iwerne Merry Duchess 3rd." Fourth Inspection Prize (£1) to G. E. Fitz-Hugh, for "Ashe Cran." Second Milking Trial Prize (£3 10s.) to Major R. F. Fuller, for "Ghalfield Rose 12th."
- Class 4.—Dairy Shorthorn Cow.—Not eligible for Classes I or 2. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10) and Extra Inspection Prize (£5) to G. Crabtree for "Cowslip." Second Inspection Prize (£3) to H. S. Horne, for "Sweet Pea." Third Inspection Prize (£3) to H. P. Mortimer, for "Queen." First Milking Trial Prize (£12) to W. & J. Hirons, for "Quarrendon Daffodil." Second Milking Trial Prize (£6) and the Shorthorn Association's Prize (£10) to A. B. Croxon for "Spot." Third Milking Trial Prize (£3 lbs.) to Allen & Rogers, for "Evensia."
- Class 5.—Darry Shorthorn Heifer.—Not eligible for Class 3. Born on or after 1st August, 1923. -First Inspection Prize (£5) to H. T. Holloway, for "Follow 2nd."
- Class 6.— Lincolnshire Red Shorthorn Cow. Entered in or eligible for the Herd Book of the Lincolnshire Red Shorthorn Association. Cows entered in this Class must have yielded a minimum of 7,000 lbs. at five years old or over, or 5,250 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.

  —First Inspection Prize (£10) to J. Evens & Son, for "Burton Vic. 19th," Second Inspection Prize (£5) and First Milking Trial Prize (£12) to S. Reading, for "Langford Dansel 21st." Third Inspection Prize (£3), Second Milking Trial Prize (£6) and Extra Inspection Prize (£5) to B. G. Bowser, for "Scothern Mystic." Third Milking Trial Prize (£3 10s). to J. Evens & Son, for "Burton Hempy 4th."
- Class 7.—Lincolnshire Red Shorthorn Heifers.—Born on or after 1st August, 1923. Entered in or eligible for the Herd Book of the Lincolnshire Red Shorthorn Association.—First Inspection Prize (£5) to J. Evens & Son, for "Burton Sylvia 2nd." Second Inspection Prize (£3) and First Milking Trial Prize (£8 10s.) to S. Reading, for "Langford Polly 21st." Third Inspection Prize (£2) and Third Milking Trial Prize (£2 10s.) to F. R. Wood, for "Bendish Lass 11th." Second Milking Trial Prize (£5) to J. Evens & Son, for "Burton Buttercup 13th."

- Class 8.—British Friesian Cow.—Born on or previous to 1st August, 1921. Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lbs., at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10) and Extra Inspection Prize (£5) to J. Martin for "Netherhall Darkie." Second Inspection Prize (£5) to C. W. H. Glossop, for "Lund (imp. 1922) Blanche 22nd." Third Inspection Prize (£3), First Milking Trial Prize (£12), the "Barham," "Spencer" and "Shirley "Challenge Cups, to Strutt and Parker Farms, Ltd., for "Lavenham Seabreeze." Second Milking Trial Prize (£6) to W. G. White & Sons, for "Muntham Troublesome." Third Milking Trial Prize (£3 10s.) to Strutt and Parker Farms, Ltd., for "Lavenham Wallen 2nd."
- Class 9.—British Friesian Cow.—Born after 1st August, 1921, and previous to 1st August, 1923. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) to C. W. H. Glossop, for "Lund Juliet." Second Inspection Prize (£3) and Second Milking Trial Prize (£3 10s.) to W. H. R. Gilbert, for "Iken Lady Graceful." Third Inspection Prize (£2) and First Milking Trial Prize (£6) to C. H. Harding, for "Hemsted Ellen." Third Milking Trial Prize (£2 10s.) to E. Furness, for "Hamels Elegance."
- Class 10.—British Friesian Heifer.—Born on or after 1st August, 1923. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and Third Milking Trial Prize (£2 10s.) to E. Furness, for "Hamels Grace." Second Inspection Prize (£3) and Second Milking Trial Prize (£3 10s.) to E. Furness, for "Hamels Foliage." Third Inspection Prize (£2) to A. Weightman, for "Beverley Warrior's Gem." First Milking Trial Prize (£6) to E. Hollingworth, for "Knebworth Ceres Galatea."
- Class 11.—South Devon Cow.—Entered in or eligible for the Herd Book of the South Devon Herd Book Society.—Cows entered in this Class must have yielded a minimum of 7,500 lbs. at five years old or over, or 5,000 lbs., at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), First Milking Trial Prize Prize (£8 10s.), Extra Inspection Prize (£5), and the South Devon Herd Book Society's Challenge Cup, to W. Hunt, for "Milkmaid 9th."
- Class 12.—South Devon Heifer.—Born on or after 1st August, 1923. Entered in or eligible for the Herd Book of the South Devon Herd Book Society. No award, all animals absent.
- Class 13.—Dairy South Devon Cow.—Entered in or eligible for the Herd Book of the Recorded Dairy South Devon Cattle Society.—Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—No award, all animals absent.
- Class 14.—Devon Cow.—Entered in or eligible for the Herd Book or entered in the Supplemental Register of such Herd Book.—Cows entered in this Class must have yielded a minimum of 6,500 lbs., at five years old or over or 4,800 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), First Milking Trial Prize (£8 10s.) Extra Inspection Prize (£5) and the "Busk" Challenge Cup to W. D. Chick, for "Lovely 4th."
- Class 15.—Red Poll Cow.—Born on or previous to 1st August, 1921. Entered in or eligible for the Herd Book.—Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection

- Prize (£7) to A. Preston Jones, for "Saham Leezie." Second Inspection Prize (£4), Second Milking Trial Prize (£5), and one-third of the Red Poll Cattle Society's Prize (£5) to the Duchess of Newcastle, for "Hardwick Hester," Third Inspection Prize (£2), Third Milking Trial Prize (£2 10s.), and Extra Inspection Prize (£5) to Sir H. Cunlifle-Owen, Bart., for "Bray Queen." First Milking Trial Prize (£8 10s.), to T. H. Sochon, for "Tendring Floss 34th."
- Class 16.—Red Poll Cow.—Born after 1st August, 1921, and previous to 1st August 1923. Entered in or eligible for the Herd Book.—First Inspection Prize (£7), Third Milking Trial Prize (£2 10s.) and one-third of the Red Poll Cattle Society's Prize (£5) to Lt.-Col. Sir Merrik R. Burrell, Bart., C.B.E., for "Knepp Prudence 4th." Second Inspection Prize (£4), Second Milking Trial Prize (£5), and one-third of the Red Poll Cattle Society's Prize (£5) to W. Hill, for "Basildon Hawthorn." Third Inspection Prize (£2) to Lady Chesham, for "Basildon Rosebud 2nd." First Milking Trial Prize (£8 10s.) to Major J. A. Morrison, D.S.O., for "Southdown Beltine."
- Class 17.—Red Poll Heifer.—Born on or after 1st August, 1923. Entered in or eligible for the Herd Book.—First Inspection Prize (£5), and the Red Poll Cattle Society's Prize (£5) to W. R. Glazebrook, junr., for "Lydiate Lass." Second Inspection Prize (£3) to Viscount Folkestone, for "Longford Desperation." Third Inspection Prize (£2) to Sir R. A. S. Black, for "Basildon Moelen." First Milking Trial Prize (£6) to Viscount Folkestone, for "Longford Courage." Second Milking Trial Prize (£3 10s.), to J. G. Gray, for "Basildon Queenliness." Third Milking Trial Prize (£2 10s.) to Major J. A. Morrison, D.S.O., for "Basildon Russett."
- Class 18.—Blue Albion Cow.—Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lb. at five years old or over, or 6,000 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10), First Milking Trial Prize (£12), and Extra Inspection Prize (£5) to B. W. Smith, for "Elsenham Jessie." Second Inspection Prize (£5) and Third Milking Trial Prize (£3) to T. H. Swire & Sons, for "Mount Sweetheart." Third Inspection Prize (£3) and Second Milking Trial Prize (£6) to J. W. Towler, for "Megdale Emma."
- Class 19.—Blue Albion Heifer.—Born on or after 1st August, 1923. Entered in or eligible for the Herd Book. First Inspection Prize (£5) and Second Milking Trial Prize (£3 10s.) to A. Gillett, for "Ridgewardine May." Second Inspection Prize (£3) and First Milking Trial Prize (£6) to J. W. Towler, for "Mount Dairymaid 2nd." Third Inspection Prize (£2) to T. H. Swire & Sons for "Mount Polly 2nd."
- Class 20.—Welsh Black Cow.—Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 7,000 lbs. at five years old or over, or 5,250 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7) and Extra Inspection Prize (£5) to Mrs. E. H. Spottiswoode, for "Gwern Clementine." Second Inspection Prize (£4), and First Milking Trial Prize (£8 10s.) to J. B. Jones, for "Bryncian Handy 6th."
- Class 21.—AYRSHIEE Cow.—Entered with a number, in the Herd Book or in the Appendices. Cows entered in this Class must have yielded a minimum of 7,500 lbs. at five years old or over, or 5,600 lbs. at under five years old either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£10), First Milking Trial Prize (£12), Extra Inspection Prize (£5) the "Rowallan," and "National Milk" Challenge Cups to J. Johnstone, for "Millantae Mayflower." Second Inspection Prize (£5) to O. D. Maxted, for "Rigg Rosie."

- Third Inspection Prize (£3) to Major C. R. Dudgeon, for "Cargen Holm Proud Lady 8th." Second Milking Trial Prize (£6) to Mrs. M. Mackay, for "Bruchag Pearl 7th." Third Milking Trial Prize (£3 10s.) to Sir T. Fowell Buxton. Bart., for "Catlinns Belinda."
- Class 22.—Ayrshire Heifer.—Registered or eligible for registration with a number in the Herd Book or in the Appendices. Born on or after 1st August, 1923. First Inspection Prize (£5) and First Milking Trial Prize (£6) to M. Cochrane, for "Ryemuir Clara." Second Inspection Prize (£3) to W. A. Thompson, for "Moorfield Vanity 2nd." Third Inspection Prize (£2) to A. W. Montgomerie, for "West Gatehead Sheba." Second Milking Trial Prize (£3 10s.) to J. Cochrane, for "Byreholm Eliza." Third Milking Trial Prize (£2 10s.) to W. A. Thompson, for "Moorfield Sparkie."
- Class 23.—Guernsey Cow.—Born on or previous to 1st August, 1921. Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old, either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), Third Milking Trial Prize (£2 10s.), Extra Inspection Prize (£5) to W. Dunkels, for "Downe Fleur of Vimiera." Second Inspection Prize (£4). First Milking Trial Prize (£8 10s.), and "Stagenhoe" (Challenge Cup, to the Misses Hargreaves, for "Lemon Gadfly." Third Inspection Prize (£2) and Second Milking Trial Prize (£5) to C. Norman, for "Hadham Goldstream 11th."
- Class 24.—GUERNSEY Cow.—Born after 1st August, 1921, and previous to 1st August, 1923. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and Third Milking Trial Prize (£2 16s.) to Major J. H. Drake, for "Cunningham Muriel." Second Inspection Prize (£3) to Sir Eric Hambro, K.B.E., for "Hayes Lady Cecilia 4th." Third Inspection Prize (£2) and Second Milking Trial Prize (£3 10s.) to E. E. Palmer, for "Jenny's Princess." First Milking Trial Prize (£6) to C. Norman, for "Hadham Nellie 14th."
- Class 25.—Guernsey Heifer.—Born on or after 1st August, 1923. Entered in eligible for the Herd Book.—First Inspection Prize (£5) and Second Milking or Trial Prize (£3 10s.) to Sir Eric Hambro, K.B.E., for "Kitty's Butterfat." Second Inspection Prize (£3) and First Milking Trial Prize (£6) to Sir Eric Hambro, K.B.E., for "Hayes Lola 6th." Third Inspection Prize (£2) to Sir Eric Hambro, K.B.E., for "Downe Princess Mary 7th." Third Milking Trial Prize (£2 10s.) to Mrs. L. Corbett, for "Hockley Princess May."
- Class 26.—Jersey Cow.—Born on or previous to 1st August, 1921. English or Island bred. Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 8,000 lbs. at five years old or over, or 6,000 lbs. at under five years old, either during a lactation period of 45 weeks, or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£7), and Extra Inspection Prize (£5) to G. Cross, for "Roberta's Star 2nd." Second Inspection Prize (£4) to R. W. Carson, for "Observer's Belle." Third Inspection Prize (£4) and the "Blythwood" Challenge Bowl to Mrs. Harry Briggs, for "Lily of the Valley." First Milking Trial Prize (£8 10s.) to R. W. Carson, for "Mastermans Golden Cidonia." Second Milking Trial Prize (£5) to Major A. W. Huntington, for "Marriette's Violet." Third Milking Trial Prize (£2 10s.) to E. Birkett, for "Clairette."
- Class 27.—Jersey Cow.—Born after 1st August, 1921, and previous to to 1st August, 1923. English or Island bred. Entered in or eligible for the Herd Book.—First Inspection Prize (£5) and Second Milking Trial Prize (£3 10s.) to Col. L. Gisborne, C.M.G., for "Cids Raleigh Spectre." Second Inspection Prize (£3) and First Milking Trial Prize (£6) to H. C. Pelly, for "Sixty Five." Third Inspection Prize (£2) to R. G. W. Berkeley, for "So Gay." Third Milking Trial Prize (£2 10s.) to G. Berry, for "Postmistress."

- Class 28.—Jersey Heifer. Born or after 1st August, 1923. English or Island bred. Entered in or eligible for the Herd Book. First Inspection Prize (£5) to Mrs. Hayes Sadler, for "Golden Beech Daisy." Second Inspection Prize (£3) to Col. L. Gisborne, C.M.G., for "Lingen Oxford Jasmine." Third Inspection Prize (£2) to Col. L. Gisborne, C.M.G., for "Spring Fern." First Milking Trial Prize (£6) to Sir Harold Mackintosh, for "Countess Pauline." Second Milking Trial Prize (£3 10s.) to A. W. Ruggles Brise, for "Patsy's May 3rd." Third Milking Trial Prize (£2 10s.) to Mrs. Hayes Sadler, for "Cid's Petune."
- Class 29.—Kerry Cow.—Entered in or eligible for the Herd Book. Cows entered m this Class must have yielded a minimum of 6,500 lbs, at five years old or over, or 4,800 lbs, at under five years old, either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£5), Third Milking Trial Prize (£2 l0s.), Extra Inspection Prize (£5) to Capt. N. Zambra and C. Williamson-Milne, for "Hattingley High Kick." Second Inspection Prize (£3), First Milking Trial Prize (£6) and the British Kerry Cattle Society's Challenge Cup to Brig.-Gen. H. Palmer, for "Coquet Gipsy." Third Inspection Prize (£2) and Second Milking Trial Prize (£3 l0s.) to Capt. N. Zambra and C. Williamson-Milne, for "Hattingley Haughty."
- Class 30.—Kerry Heifer. Born on or after 1st August, 1923. Entered in or eligible for the Herd Book. First Inspection Prize (£5) and Third Milking Trial Prize (£2 10s.) to B. W. A. Watney, for "Moonstone of Warren." Second Inspection Prize (£3) and Second Milking Trial Prize (£3 10s.) to J. W. Towler, for "Wadlands Flash Drops." Third Inspection Prize (£2) and First Milking Trial Prize (£6) to J. W. Towler, for "Wadlands Flash Mona."
- Class 31.—Dexter Cow.—Entered in or eligible for the Herd Book. Cows entered in this Class must have yielded a minimum of 5,000 lbs. at five years old or over, or 3,750 lbs. at under five years old, either during a lactation period of 45 weeks or for any one completed year of a recognised Milk Recording Society.—First Inspection Prize (£5), and Extra Inspection Prize (£5) to T. A. Stephens, for "Just Found of Hookstile," Second Inspection Prize (£3) to Mrs. M. H. Neville, for "Barrow Buttercup 14th." Third Inspection Prize (£2), First Milking Trial Prize (£6) and the "Nutt" Challenge Cup to Mrs. H. P. May, for "Barbara."
- Class 32. Dexter Heifer. -Born on or after 1st August, 1923. Entered in or eligible for the Herd Book. Cancelled.

#### BUTTER TESTS.

- SHORTHORNS, entered in Classes I. 2, 3, 4, 5, 6, and 7. First Prize (£10 and Silver Medal) to S. Reading, for "Langford Damsel 21st." Second Prize (£5 and Bronze Medal) and the "Shorthorn Butter" Challenge Cup, to A. B. Croxon, for "Spot." Third Prize (£3) to R. Tustian, for "Greattew Blossom." Fourth Prize (£2) to Allen and Rogers, for "Grand Duchess Oxford 30th."
- British Frieslans, entered in Classes 8, 9, and 10.—First Prize (£10 and Silver Medal) to W. G. White & Sons, for "Muntham Troublesome." Second Prize (£5 and Bronze Medal) to Strutt & Parker Farms, Ltd., for "Lavenham Seabreeze." Third Prize (£3) to Strutt & Parker Farms, Ltd., for "Lavenham Wallen 2nd." Fourth Prize (£2) to F. Sykes, for "Kingswood Ceres Daisy."
- Red Polls, entered in Classes 15, 16, and 17.—First Prize (£5 and Silver Medal) to T. H. Sochon, for "Tendring Floss 34th." Second Prize (£3 and Bronze Medal) to J. G. Gray, for "Seven Springs Bessy." Third Prize (£2) to Major J. A. Morrison, D.S.O., for "Basildon Russett."

- AYRSHIRES, entered in Classes 21 and 22.—First Prize (£5 and Silver Medal) to J. Cochrane, for "Byreholm Buntie." Second Prize (£3 and Bronze Medal) to Sir T. Fowell Buxton, for "Catlinns Belinda." Third Prize (£2) to Mrs. M. Mackay, for "Bruchag Pearl 7th."
- Guernseys, entered in Classes 23, 24, and 25.—First Prize (£5 and Silver Medal) to the Misses Hargreaves, for "Lemon Gadfly." Second Prize (£3 and Bronze Medal) to C. Norman, for "Hadham Goldstream 11th." Third Prize (£2) to W. Dunkels, for "Downe Fleur of Vimiera."
- JERSEYS, entered in Classes 26, 27 and 28.—First Prize (£5) E. J. C. S. Gold Medal and "National Butter" Challenge Cup to H. C. Pelly, for "Mastermaid." Second Prize (£3) and E. J. C. S. Silver Medal to R. W. Carson, for "Mastermans Golden Cidonia." Third Prize (£2) and E. J. C. S. Bronze Medal to Major A. W. Huntington, for "Marriette's Violet."
- OTHER BREEDS entered in Classes 11 to 14, 18 to 20, and 29 to 31.—Prizes of £3 each to W. Hunt, for "Milkmand 9th" (South Devon); W. D. Chick, for "Lovely 4th" (Devon); A. Gillett, for "Brampton Jewell" (Blue Albion); J. B. Jones, for "Bryncian Handy 6th" (Welsh Black); Brig.-Gen. H. Palmer, for "Coquet Gipsy" (Kerry); Mrs. H. P. May, for "Barbara" (Dexter); Prizes of £2 each to Lt.-Col. W. E. Harrison, for "Bramshall Margaret" (Blue Albion); Capt. N. Zambra and C. Williamson-Milne, for "Hattingley High Kick" (Kerry).

#### BULLS.

- Class 33.—Dairy Shorthorn Bull.—Entered in or eligible for Coates' Herd Book, born previous to 1st August, 1924.—First Prize (£10) to L. Hignett, for "Kelmscott Imperialist 71st." Second Prize (£5) to E. G. G. Frost, for "Kenilworth Dairyman 2nd." Third Prize (£3) to P. E. de Clermont, for "Batsford Manager."
- Class 34.—Dairy Shorthorn Bull.—Entered in or eligible for Coates' Herd Book, born on or after 1st August, 1924.—First Prize (£10) to Capt. the Hon. E. A. FitzRoy, for "Foxhill Songster." Second Prize (£5) to Capt. P. D. A. Courtenay, for "Brent Barrington Snowstorm." Third Prize (£3) to E. A. Smith, for "Longhills Lord Price." Fourth Prize (£2) to A. H. W. Osborne & Sons, for "Campsfield Squire 2nd."
- Class 35.—British Friesian Bull.—Entered in or eligible for the Herd Book, born on or after 1st August, 1924.—First Prize (£5) to Friend Sykes, for "Kingswood Beatty's Challenger."
- Class 36.—Red Poll Bull.—Entered in or eligible for the Herd Book, born after 1st August, 1924, and on or prior to 1st August, 1925.—First Prize (£5) to Major J. A. Morrison, D.S.O., for "Basildon Conqueror." Second Prize (£3) to O. H. Smith, for "Combs Eros."
- Class 37.—Jersey Bull.—Entered in or eligible for the Herd Book, born on or after 1st August, 1923.—First Prize (£10) to G. Cross, for "Penshurst Coeurde-Lion." Second Prize (£5) to Mrs. Hayes Sadler, for "Oxford." Third Prize (£3) to C. W. Hough, for "Lilac's Golden Cid."

#### SHE-GOATS.

# MILKING COMPETITION FOR GOATS OF ANY VARIETY.

The "Dewar" Challenge Cup for Goat and Goatling awarded to Miss C. A. M. Booth, for "Atherstone Collette" and "Springfield Lealty (British Saanen.)

- Class 38.—She-Goat qualified as "Star or 'Q' Star Milker."—First Prize (£6 and Silver Medal), the "Tremedda Selene" Challenge Cup, the "Dewar" Challenge Trophy, the "Baroness Burdett-Coutts" Challenge Cup, and Challenge Certificate to Miss C. A. M. Booth, for "Atherstone Collette" (British Saanen). Second Prize (£3) to Mrs. A. Abbey, for "Didgemere Dream" (Anglo-Nubian Swiss). Third Prize (£1 10s.) to Miss C. A. M. Booth for "Springfield Unity" (British Saanen).
- Class 39.—She-Goats not eligible for Class 38.— First Prize (£6 and Silver Medal) to Mrs. A. Abbey, for "Didgemere Dogrose" (Anglo-Nubian Swiss). Second Prize (£3) to Mrs. A. Abbey, for "Didgemere Duleette" (British Alpine). Third Prize (£1 10s.) to Mrs. A. Abbey, for "Didgemere Delia" (British Alpine).

#### INSPECTION CLASSES.

- The "Riding" Challenge Cup for best group of three Goats awarded to Mrs. A. Abbey, for "Didgemere Delilah" (British Alpine). "Didgemere Dream" (Anglo-Nubian Swiss), and "Didgemere Delia" (British Alpine).
- Class 40.—She-Goat, Toggenburg, entered in the Toggenburg Section of the Herd Book, or eligible for entry therein. First Prize (£2 10s.), Breed Challenge Certificate, and the "Toggenburg" Challenge Cup to P. Wainwright, for "Fryston Senna." Second Prize (£1 5s.) to Mrs. Moreom, for "Berones."
- Class 41.—She-Goat, British Toggenburg and British Saanen. First Prize (£2 10s.) to Miss C. A. M. Booth, for "Atherstone Collette." Second Prize (£1 5s.) to Miss C. A. M. Booth, for "Springfield Unity." Third Prize (15s.) to Miss C. Chamberlain, for "Champion Wistful of Westons."
- Class 42.—She-Goat, British Alpine.— First Prize (£2 10s.) to Mrs. A. Abbey, for "Didgemere Delia." Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Delilah." Third Prize (15s.) to Mrs. F. J. Browell, for "Pastime of Bashley."
- Class 43.—She-Goat, Saanen.—Entered in or eligible for entry in the Swiss or Saanen Section of the Herd Book.—First Prize (£2 10s.) and Breed Challenge Certificate to Miss C. A. M. Booth, for "Springfield Fidelity." Second Prize (£1 5s.) to Mrs. F. J. Browell, for "Hartje." Third Prize (15s.) to Miss C. J. Arkell, for "Beechmead Linde."
- Class 44.—She-Goat, Anglo-Nubian, being any Goat entered in the Anglo-Nubian Section of the Herd Book, or eligible for entry therein. - First Prize (£2 10s.) and Breed Challenge Certificate to R. Turner, for "Herne Bay Princess."
- Class 45.—She-Goat, Any other Variety, not eligible for previous Classes.— First Prize (£2 10s.) the British Goat Society's Challenge Cup and Challenge Certificate to Mrs. A. Abbey, for "Didgemere Dream" (Anglo-Nubian Swiss). Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Deebee" (Anglo-Nubian Swiss). Third Prize (15s.) to Mrs. A. Abbey, for "Didgemere Dogrose" (Anglo-Nubian Swiss).
- Class 46.—She-Goat that is recorded under a recognised Milk Recording Society.—
  First Prize (£2 10s.) to Mrs. A. Abbey, for "Didgemere Dream" (AngloNubian Swiss). Second Prize (£1 5s.) to Miss C. A. M. Booth, for "Atherstone Collette" (British Saanen). Third Prize (15s.) to Mrs. A. Abbey, for
  "Didgemere Deebee" (Anglo-Nubian Swiss).
- Class 47.—Goatling, Toggenburg and British Toggenburg.—Over one year but not exceeding two years.—First Prize (£2 10s.) to Mrs. M. J. Rutter, for "Raydon Aerial." Second Prize (£1 5s.) to P. Wainwright, for "Fryston Sally." Third Prize (15s.) to Miss Alexander, for "Stockwell Coral."

- Class 48.—Goatling, British Alpine.—Over one year, but not exceeding two years.—First Prize (£2 10s.) and B.G.S. Bronze Medal to Miss C. Chamberlain, for "Whimsical of Westons." Second Prize (£1 5s.) to Lady Forteviot, for "Dupplin Darling." Third Prize (15s.) to Mrs. A. Abbey, for "Priestess of Bashley."
- Class 49.—Goatling, Saanen or British Saanen.—Over one year, but not exceeding two years.—First Prize (£2 10s.) to Miss C. A. M. Booth, for "Springfield Lealty." Second Prize (£1 5s.) to Mrs. R. E. Wroughton, for "Lucretia. Third Prize (15s.) to Miss E. Skidmore, for "Heddon Symbol."
- Class 50.—Goatling, Anglo-Nubian.—Entered in or eligible for entry in the Anglo-Nubian Section of the Herd Book.—Over one year, but not exceeding two years.—First Prize not awarded. Second Prize (£1 5s.) to R. Turner, for "Herne Bay Vallonna."
- Class 51.—Goatling, any other Variety.—Not eligible for previous Classes. Over one year, but not exceeding two years.—First Prize (£2 10s.) to Miss Alexander for "Stockwell Tyclette" (Anglo-Nubian Swiss). Second Prize (£1 5s.) to Mrs. A. Abbey, for "Didgemere Day" (Anglo-Nubian Swiss). Third Prize (15s.) to Miss Pope, "Proverb of Bashley." (Anglo-Nubian Swiss).

#### CHEESE.

- Class 52.—Stilton (6 Cheeses).—First Prize (£7) and the Lord Mayor's Champion Cup, to The Colston Bassett and District Dairy, Ltd. Second Prize (£4) to The Misses M. F. & J. Webster. Third Prize (£2) to The Harby Farmers' Dairy, Ltd.
- Class 53—STILTON (18 Cheeses).—First Prize (£10 and Silver Medal), to The Colston Bassett and District Dairy, Ltd. Second Prize (£5) to The Harby Farmers' Dairy. Ltd. Third Prize (£3) to The Cropwell Bishop Dairy Co., Ltd.
- Class 54.—CHEDDAR TRUCKLES (6 Cheeses).—First Prize (£7) to B. Chinn. Second Prize (£4) to W. H. Collins. Third Prize (£2) to F. Portch.
- Class 55.—CHEDDAR (4 Cheeses).—First Prize (£7) and the "N. K. J." Challenge Cup to S. T. White. Second Prize (£4) to A. H. Stevenson. Third Prize (£3) to E. Marsh. Fourth Prize (£2) to G. R. Cole. Fifth Prize (£1) to J. P. Hunter.
- Class 56.—CHEDDAR (12 Cheeses).—First Prize (£15 and Silver Medal), to A. H. Hunt. Second Prize (£10) to S. T. White. Third Prize (£7) to T. Durden. Fourth Prize (£5) to F. G. Nurse & Sons. Fifth Prize (£3) to F. Portch.
- Class 57.—COLONIAL CHEDDAR, Coloured or Uncoloured (4 Cheeses not less than 60 lbs. each). First Prize (Gold Medal) and the "Hansen" Challenge Trophy to J. T. Moxham. Second Prize (Silver Medal) to W. C. Taylor. Third Prize (Bronze Medal) to H. E. Donnelly.
- Class 58.—Cheshire (12 Cheeses).—First Prize (£15), the "Robert Barbour" Prize (£5) and the "Fullwood & Bland" Challenge Cup to O. Hesketh. Second Prize (£10) to W. E. Moore. Third Prize (£7) to G. Sutton. Fourth Prize (£5) to T. E. Beckett. Fifth Prize (£3) to E. A. Cookson.
- Class 59.—CHESHIRE (4 Coloured Cheeses, not less than 40 lbs. each).—First Prize (£7) to P. H. Walley. Second Prize (£4) to W. E. Moore. Third Prize (£2) to B. T. Dutton.
- Class 60.—CHESHIRE (4 Uncoloured Cheeses, not less than 40 lbs. each).—First Prize (£7) to O. Hesketh. Second Prize (£4) to W. H. Hobson. Third Prize (£2) to P. H. Walley.

- Class 61.—Cheshire (4 Cheeses, not less than 40 lbs. each).—Open only to those who have never won a Prize for Cheshire Cheese at any Show of the British Dairy Farmers' Association. —First Prize (£5) to J. H. Williams. Second Prize (£3) to T. E. Beckett. —Third Prize (£2) to B. T. Dutton.
- Class 62.—Factory,—To be manufactured at and exhibited by a recognised Cheese Factory dealing with a minimum of 500 gallons of milk daily (10 Cheeses, any Variety, not less than 28 lbs. each). First Prize (27) to The Kilmaurs Dairy Association, Ltd. Second Prize (21) to The Ruyton Co-operative Dairies, Ltd. (Ruyton). Third Prize (22) to C. M. Hallett. Fourth Prize (41) to The Ruyton Co-operative Dairies, Ltd. (Baschurch).
- Class 63.—Leicester (4 Cheeses).—First Prize (£4) to J. Harrison. Second Prize (£3) to The East Anglian Institute of Agriculture. Third Prize (£2) to The British Dairy Institute.
- Class 64.—Lancashire (4 Cheeses).—First Prize (£4) to W. Duckworth. Second Prize (£3) to T. Butler. Third Prize (£2) to J. Exton.
- Class 65.—Derby (4 Uncoloured Cheeses, not less than 25 lbs. each). First Prize (£4) to J. Harrison. Second Prize (£3) to The British Dairy Institute. Third Prize (£2) to The Cheddar Valley Dairy Co., Ltd.
- Class 66.—Double Gloster (4 Cheeses, from 26 lbs. to 30 lbs. each, total weight not to exceed 120 lbs.). First Prize (£4) to E. F. Jones. Second Prize (£3) to The Cheddar Valley Dairy Co., Ltd. Third Prize (£2) to Miss H. M. Naish.
- Class 67.—Single Gloster (4 Cheeses, from 13 lbs. to 15 lbs. each, total weight not to exceed 60 lbs.).—First Prize (£4) to Mrs. W. Haine. Second Prize (£3) to E. F. Jones. Third Prize (£2) to Miss H. M. Naish.
- Class 68.—Caerhilly (4 Cheeses, not exceeding 8 lbs. each).—First Prize (£4) to W. Carey. Second Prize (£3) to The Cheddar Valley Dairy Co., Ltd. Third Prize (£2) to T. G. Collings.
- Class 69.—Wensleydale (6 Cheeses, Blue-moulded). First Prize (£4) to J. M. Nuttall & Co., Ltd. Second Prize (£3) to A. Rowntree & Son (Coverham). Third Prize (£2) to A. Rowntree & Son (Mashain).
- Class 70.—SMALLHOLDER PRESSED (Long Keeping) (2 Cheeses not exceeding 81bs. each).—First Prize (£3) the "Walker" Challenge Cup and the Lord Mayor's Champion Cup to W. J. Wareham. Second Prize (£2) to Mrs. E. Gadd, Third Prize (£1) to Miss C. S. Gaisford. Fourth Prize (10s.) to F. Portch.
- Class 71. --SMALLHOLDER PRESSED (Quick Ripening) (2 Cheeses, not exceeding 8 lbs. each.) -- First Prize (£3) and the "McWilliam" Fruit Dish to Miss H. M. Naish. Second Prize (£2) to H. Stainer. Third Prize (£1) to Mrs. E. Gadd. Fourth Prize (10s.) to Mrs. L. T. Morris.
- Class 72.—SMALL CHEDDAR (2 Cheeses, made at home, from 8 lbs. to 10 lbs. each).
  —Open to pupils who have attended County Travelling Cheese Schools during 1925 or 1926.—First Prize (£3) to Miss K. M. Precec. Second Prize (£2) to Miss C. S. Gaisford. Third Prize (£1) to Miss E. Hulands. Fourth Prize (10s.) to Miss M. Haine.
- Class 73.—SMALL CHESHIER (2 Cheeses, made at home, from 8 lbs. to 10 lbs. each).
  —Open to pupils who have attended County Travelling Cheese Schools during 1925 or 1926.—First Prize (£3) to S. Shaw. Second Prize (£2) to Miss E. Barratt. Third Prize (£1) to J. Gerrard. Fourth Prize (10s.) to A. P. Sadler.

- Class 74.—Inter-County Competition.—For the Best Collection of Small-Holder Cheeses made by the persons who have received instruction in Cheesemaking at a County Council Travelling Cheese School during 1923-1926. The Head Teacher or County Organiser in each County to make the entry, which shall consist of six individual Competitors whose names shall be stated at the time of entry. Each Competitor's Exhibit shall consist of four cheeses—manufactured in Competitor's own dairies—of not more than 8lbs. each in weight, and the number of distinct varieties and types are taken into consideration when making Awards. The prizes to be allocated: One half to the successful Competitors and one half to the County Teacher or Teachers. A Certificate of Merit will be awarded by the British Dairy Farmers' Association to each individual competitor receiving a Prize. Cancelled.
- Class 75.—CREAM CHEESE, made from pure Cream only. No Milk or Curd to be added (6 Cheeses).—First Prize (£1) to Capt. L. Learmonth. Second Prize (10s.) to The Rt. Hon. Sir F. Halsey, Bart.
- Class 76.—Unripened Soft Cheese, other than Cream Cheese. Made direct from Milk (4 Cheeses).—First Prize (£1) to S. E. Butler. Second Prize (10s.) to F. Webster.

#### COLLECTION OF PRODUCE.

Class 77.—Open only to Women's Institutes To consist of 2 lbs. Fresh Butter, I lb. Cream (raw or scalded) and 2 dozen Eggs. The Collection to be packed in a box and sent to the Show by Parcel Post. Packages taken into consideration when making awards.—First Prize (£5) to The East Bridgtord Women's Institute. Second Prize (£3) to The Wilby Women's Institute. Third Prize (£2) to The Epperstone Women's Institute.

#### BACON.

- Class 78.—Rolled, Pale Dried with Skin on, cured on the Farm or in the Home.—Cancelled.
- Class, 79.—SMOKED (4 sides, mild cured in Wiltshire style, with ham attached).— First Prize (£5) to J. R. Johnson & Son. Second Prize (£3) to The West Somerset Dairy & Bacon Co., Ltd.
- Class 80.—Pale Dried (4 sides, mild cured in Wiltshire style, with ham attached).
  —First Prize (£5) to J. R. Johnson & Son. Second Prize (£3) to M. Venner & Sons, Ltd.
- Class 81.—Two Sides of Bacon Smoked, Two Sides of Bacon Pale Dried, Two Hams Smoked and Two Hams Pale Dried (the weight of the sides not less than 56 lbs. and not more than 68 lbs. each; the hams not less than 12 lbs. and not more than 20 lbs. each).—First Prize (£7 7s.) to The Herts. & Beds. Bacon Factory. Second Prize (£3 3s.) to J. R. Johnson & Son. Third Prize (£2 2s.) to M. Venner & Sons, Ltd.
- Class 82.—Bacon Pigs (6 pigs entered by their respective Breed Societies).—Prize (The "Whitley" Challenge Cup) and the "Harris" Challenge Cup, to the Gloucestershire Old Spots Pig Society.
- Class 83.—BACON PIGS, PEDIGREE (2 pigs entered by Breeders).—First Prize (The "Beale" Challenge Cup) to W. H. Middle (Gloucestershire Old Spots).

  Second Prize (£3) to Bennett & Howard (Gloucestershire Old Spots). Third Prize (£2) to Major-Gen. R. L. Mullens, C.B., (Large White).

- Class 84.—BACON PIGS.—FIRST CROSS (2 pigs entered by Breeders).—First Prize (The "Bledisloe" Bacon Challenge Cup) to H. H. Pickford (Large White and Large Black). Second Prize (£3) to Lord Bledisloe, K.B.E. (Large White and Large Black). Third Prize (£2) to The Cathedral Dairy (Middle White and Large White).
- Class 85.—Colonial (4 sides).—First Prize (Silver Medal) and Second Prize (Bronze Medal) to The Farmers' Co-operative Bacon Factory, Ltd.

#### HAMS

- Class 86.—Pale Dried (4 hams, long cut, of Winter or Spring cure, not over 14 lbs. weight).—First Prize (£5) to W. H. Smart & Co., Ltd. Second Prize (£3) to Marsh & Baxter, Ltd.
- Class 87.—Pale Dried (4 hams, long cut, of Winter or Spring cure, over 14 lbs. weight).—First Prize (£5) to W. H. Smart & Co., Ltd. Second Prize (£3) to W. H. Smart & Co., Ltd.
- Class 88.—Smoked (4 hams, long cut, mild cured, not over 10 weeks cured, not over 15 lbs. weight).—First Prize (£5) to W. II. Smart & Co., Ltd. Second Prize (£3) to W. H. Smart & Co., Ltd.
- Class 89.—Pale Dried (4 hams, long cut, mild cured, not over 10 weeks cured, over 15 lbs. weight).—First Prize (£5) to Roberts & Birch, Ltd. Second Prize (£3) to W. H. Smart & Co., Ltd.
- Class 90.—Two Hams, one Pale Dried and one Smoked (cured in the Farmhouse or Home; dealers and professional bacon curers not eligible).—Cancelled.
- Class 91.—One Ham (home cured). Open only to Members of Women's Institutes.
  —Cancelled.
- Class 92.—Selling Class (2 hams, any variety).—First Prize (£2) to Roberts & Birch, Ltd. Second Prize (£1) to Marsh & Baxter, Ltd. Third Prize (10s.) to W. H. Smart & Co., Ltd.

#### BUTTER.

- Class 93.—SLIGHTLY SALTED. Open only to farmers, their wives, sons and daughters, occupying not exceeding 100 acres, and who have never won a prize in the Butter Classes at any of the Association's Shows; 2 lbs. in 1-lb. lumps (brick shape).—First Prize (£3) to Miss P. L. Mudd. Second Prize (£2) to Miss M. F. Trimingham. Third Prize (£1) to Miss J. Seldon. Fourth Prize (10s.) to Mrs. E. E. Penna.
- Class 94.—Perfectly Free from Salt (the produce of Channel Islands Cattle and their Crosess; 2 lbs. in 1-lb. lumps, brick shape).—First Prize (£3) to Mrs. H. Lewis. Second Prize (£2) to Mrs. W. Irving. Third Prize (£1) to The Earl of Guildford. Fourth Prize (10s.) to Mrs. H. B. Veale.
- Class 95.—SLIGHTLY SALTED (the produce of Channel Islands Cattle and their Crosses; 2 lbs. in 1-lb. lumps, brick shape).—First Prize (£3) to J. Pierpont Morgan. Second Prize (£2) to Mrs. H. B. Vealc. Third Prize (£1) to The Earl of Guildford. Fourth Prize (10s.) to Mrs. L. R. Mildon. Fifth Prize (5s.) to Mrs. Ward.
- Class 96.—Perfectly Free from Salt (the produce of Shorthorn and other Cattle and their Crosses, except Channel Islands and their Crosses; 2 lbs. in 1-lb. lumps, brick shape). First Prize (£3) to Miss R. James. Second Prize (£2) to Miss A. Bray. Third Prize (£1) to Mrs. R. J. Dunstan. Fourth Prize (10s.) to Mrs. W. Irving. Fifth Prize (5s.) to Mrs. G. E. Blackler.

- Class 97.—SLIGHTLY SALTED (the produce of Shorthorn and other Cattle and their Crosses, except Channel Islands and their Crosses; 2 lbs. in 1-lb. lumps brick shape).—First Prize (£3) and the Lord Mayor's Champion Cup to Miss J. Seidon. Second Prize (£2) to Capt. L. Learmonth. Third Prize (£1) to Mrs. L. R. Mildon. Fourth Prize (10s.) to Mrs. W. Irving. Fifth Prize (5s.) to Miss A. Underwood.
- Class 98.—SLIGHTLY SALTED, to be made from Scalded Cream only (2 lbs. in 1-lb. lumps, brick shape).—First Prize (£3) to Miss K. Rogers. Second Prize (£2) to Mrs. R. J. Dunstan. Third Prize (£1) to Miss A. Feby. Fourth Prize (10s.) to Mrs. W. Irving.
- Class 99.—SLIGHTLY SALTED, in boxes of 12 bricks of 1-lb each.—First Prize (£3) to The Bruree Co-operative Creamery, Ltd. Second Prize (£2) to The Dromkeen Co-operative Creamery, Ltd. Third Prize (£1) to The Macamore Co-operative Dairy Society, Ltd. Fourth Prize (10s) to The Kilkenny Co-operative Creamery, Ltd.
- Class 100.—Free from Salt (24-lb. boxes of 12 rolls).—First Prize (£3) to The Shanagolden Co-operative Dairy Society, Ltd. Second Prize (£2) to The Glenwilliam Co-operative Dairy Society, Ltd. Third Prize (£1) to The Ardagh Co-operative Society, Ltd.
- Class 101.—MILD CURED (Slightly Salted in 24-lb. boxes of 24 rolls)—First Prize (£3) to The Ardagh Co-operative Darry Society, Ltd. Second Prize (£2) to Adams Dairies (Wholesale). Third Prize (£1) to The Dromkeen Co-operative Creamery. Fourth Prize (10s.) to The Bruree Co-operative Creamery, Ltd.
- Class 102.—Cured (Slightly Salted, 28 lbs.).—First Prize (£3) to The Shanagolden Co-operative Dairy Society, Ltd. Second Prize (£2) to The Bruree Co-operative Creamery, Ltd. Third Prize (£1) to The Kilkenny Co-operative Creamery, Ltd. Fourth Prize (10s.) to The Drumcliffe Co-operative Dairy Society, Ltd.
- Class 103.—Cured (56 lbs.).—First Prize (£3) to The Bruree Co-operative Creamery, Ltd. Second Prize (£2) to The Shanagolden Co-operative Dairy Society, Ltd. Third Prize (£1) to The Ardagh Co-operative Dairy Society, Ltd. Fourth Prize (10s.) to the Rathmore Co-operative Creamery, Ltd.
- Class 104.—Two Pounds, made up in the most attractive form for table use.—
  First Prize (£3) to Mrs. G. E. Blackler. Second Prize (£2) to Miss E. Challenger.
  Third Prize (£1) to Miss H. M. Trenchard.
- Class 105.—FANCY OR ORNAMENTAL DESIGN (with Foliage or other extraneous Decoration).—First Prize (£5) to Miss P. L. Mudd. Second Prize (£3) to Miss H. M. Trenchard.

#### COLONIAL BUTTER.

- Class 106.—Salted (one box containing not less than 56 lbs.).—First Prize (Gold Medal) to The Casino Co-operative Dairy Co., Ltd. Two Second Prizes (Silver Medals) to The South Australian Farmers' Co-operative Union Ltd. (Orrorroo Factory and Narracoorte Factory). Three Third Prizes (Bronzo Medals) to The Queensland Farmers' Co-operative Co., Ltd.; The South Australian Farmers' Co-operative Union, Ltd., and Foley Bros., Ltd.
- Class 107.—Unsalted (one box containing not less than 56 lbs.).—First Prize (Gold Medal) to The Casino Co-operative Dairy Co., Ltd. Two Second Prizes (Silver Medals) to The Alstonville Co-operative Dairy Society, Ltd., and Foley Bros., Ltd. Two Third Prizes (Bronze Medals) to The Pambula Co-operative Creamery & Dairy Co., Ltd., and The South Wolumla Creamery Co., Ltd.

## COLLECTION OF COLONIAL DAIRY PRODUCE.

Class 108.—To include Bacon, Dead Poultry and Eggs.—Prize (Gold Medal) to The Government of Ontario.

#### CREAM

- Class 109.—CLOTTED.—First Prize (£2 2s. and Silver Medal) to Mrs. E. A. Tinney. Second Prize (£1 1s. and Bronze Medal) to W. Beer.
- Class 110.—Other than Clotted.—First Prize (£2 2s. and Silver Medal) to C. Swithinbank. Second Prize (£1 1s. and Bronze Medal) to A. Corrie.

# BOTTLED FRUIT, VEGETABLES, AND JAMS.

- Class 111.—SIX BOTTLES OF SOFT FRUIT, of not less than 4 Varieties (Rhubarb admitted).—First Prize (£2) to Miss E. M. Gunnell, Second Prize (£1) to Miss C. R. Swain. Third Prize (10s.) to Mrs. E. Caddick.
- Class 112.—SIX BOTTLES OF STONE FRUIT, of not less than 4 Varieties (Apples and Pears admitted).—First Prize (£2) to Miss C. R. Swain. Second Prize (£1) to The Cathedral Dairy. Third Prize (10s.) to Mrs. J. Pantall.
- Class 113.—Three Bottles of Soft Fault, distinct. First Prize (£1) to Mrs. E. Caddick. Second Prize (10s.) to Mrs. Turney. Third Prize (7s. 6d.) to Miss C. R. Swain.
- Class 114.—Three Bottles of Stone Fruit, distinct.—First Prize (£1) to Miss C. R. Swain. Second Prize (10s.) to Mrs. E. Caddick. Third Prize (7s. 6d.) to Mrs. Turney.
- Class 115.—Three Bottles of Stone or Soft Fruit, distinct, preserved in Syrup.—First Prize (£1) to Mrs. E. Caddick. Second Prize (10s.) to Mrs. J. Pantall. Third Prize (7s. 6d.) to Miss E. M. Gunnell.
- Class 116.—SIX BOTTLES OF VEGETABLES, of not less than 4 Varieties (Tomatoes admitted).—First Prize (£2) to Miss C. R. Swain. Second Prize (£1) to Mrs. E. Caddick. Third Prize (10s.) to Mrs. J. Pantall.
- Class 117.—Three Bottles of Vegetables, distinct.—First Prize (£1) to Miss E. M. Gunnell. Second Prize (10s.) to Miss C. R. Swain. Third Prize (7s. 6d.) to Mrs. H. Palmer.
- Class 118.—THERE JARS OF JAM (1-lb. each, dissimilar, any Variety).—First Prize (£1) to The Cathedral Dairy. Second Prize (10s.) to Miss D. E. Williams. Third Prize (7s. 6d.) to Miss M. E. Shuter.
- Class 119.—Combined Exhibit of Bottled Fruits, Vegetables, Jams, Fruit Jellies, Pickles and Chutneys, open only to Women's Institutes. To consist of 3 bottles of Soft Fruit, 3 bottles of Stone Fruit, 3 bottles of Vegetables, 3 1-lb. jars of Jam or Fruit Jelly, 3 jars of Pickles or Chutney. All exhibits to be shown in glass containers and to be of not less than two varieties.—First Prize (£5 and Silver Medal) to The St. Weonard's Women's Institute. Second Prize (£3) to The Loose Women's Institute. Third Prize (£2) to The Snape Women's Institute.

# HONEY, WAX, &c.

Class 120.—SIX JARS OF LIGHT-COLOURED EXTRACTED HONEY (1-lb. aach approximate weight).—First Prize (£1) to E. C. R. White. Second Prize (15s.) to J. S. Leigh. Third Prize (12s. 6d.) to E. D. Dear. Fourth Prize (10s.) to A. J. Harrris.

- Class 121.—SIN JARS OF MEDIUM-COLOURED EXTRACTED HONEY, other than Heather Honey (1-lb. each approximate weight).—First Prize (£1) to Miss A. B. Flower. Second Prize (15s.) to G. F. Mence. Third Prize (12s. 6d.) to W. J. Goodrich. Fourth Prize (10s.) to E. D. Dear.
- Class 122.—Six Jars of Dark Coloured Extracted Honey, including any Variety of Heather Mixture (1-lb. each approximate weight).—First Prize (£1) to Miss A. B. Flower. Second Prize (15s.) to J. S. Leigh. Third Prize (10s.) to W. Trinder.
- Class 123.—SIX JARS OF GRANULATED HONEY, of 1925 or any previous year (1-lb. each approximate weight).—First Prize (£1) to W. Trinder. Second Prize (10s.) to G. F. Mence. Third Prize (7s. 6d.) to Miss A. B. Flower.
- Class 124.—SIX SECTIONS OF HONEY, other than Heather (size 4½ by 4½, 1-lb. each approximate weight).—First Prize (£1) to Miss A. B. Flower. Second Prize (15s.) to W. C. Adlem. Third Prize (10s.) to Robson & Cessford.
- Class 125.—DISPLAY OF COMB AND EXTRACTED HONEY, of any year (approximately 100-lbs. in weight, shown on a space of 3 ft. 6 in. by 3 ft. 6 in. outside measurement).—First Prize (£5) to Miss A. B. Flower. Second Prize (£2) to F. C. Robertson. Third Prize (£1) to A. E. Warren.
- Class 126.—Wax (not less than 2-lbs. in 2 cakes only; the produce of the Exhibitor's Apiary; extracted and cleaned by the Exhibitor or his Assistants).

  —First Prize (15s.) to Miss A. B. Flower. Second Prize (10s.) to Mrs. G. Davies. Third Prize (7s. 6d.) to D. Jones & Son.
- Class 127.—Wax (not less than 3-lbs.; the produce of the Exhibitor's Apiary; extracted and cleaned by the Exhibitor or his Assistants; to be shown in shape, quality and package suitable for the retail trade).—First Prize (15s.) to Mrs. G. Davis.
- Class 128.—Interesting and Instructive Exhibit of a Practical of Scientific Nature, connected with Bee Culture, not mentioned in the foregoing Classes.—First Prize (15s.) to Miss A. B. Flower, for Hive Indicator.
- Class 129.—Three Vessels of Colonial Extracted Honey, as imported.— First Prize (Silver Medal) to The Ontario Beekeepers' Association. Second Prize (Bronze Medal) to The Ontario Beekeepers' Association.

#### ROOTS.

- Class 130.—SIX SPECIMENS OF GLOBE MANGOLDS, drawn from a crop of not less than two acres.—First Prize (£3) to W. Watts. Second Prize (£2) to H. F, Read. Third Prize (£1) to Exors. of A. D. Willcox.
- Class 131.—Six Specimens of Golden Tankard Mangolds, Yellow Fleshed, drawn from a crop of not less than two acres.—First Prize (£3) to W. Watts. Second Prize (£2) to D. Thomas. Third Prize (£1) to W. Jones.
- Class 132.—SIX SPECIMENS OF INTERMEDIATE MANGOLDS, drawn from a crop of not less than two acres. First Prize (£3) to W. Watts. Second Prize (£2) to D. Thomas. Third Prize (£1) to W. Jones.
- Class 133.—SIX SPECIMENS of SWEDES, PURPLE TOP, drawn from a crop of not less than two acres.—First Prize (£3) to T. Walker. Second Prize (£2) to W. Watts. Third Prize (£1) to P. Perry.
- Class 134.—SIX SPECIMENS OF SWEDES, BRONZE TOP OR GREEN TOP, drawn from a crop of not less than two acres.—First Prize (£3) to J. Meikle. Second Prize (£2) to W. Humphreys. Third Prize (£1) to T. W. Turnbull.

- Class 135.—Six Specimens of Turnips, White-fleshed, drawn from a crop of not less than two acres. First Prize (£3) to T. W. Turnbull. Second Prize (£2) to R. Paterson. Third Prize (£1) to W. Watts.
- Class 136.—SIX Specimens of Turnies, Yellow-fleshed, drawn from a crop of not less than two acres. First Prize (£3) to J. Brown. Second Prize (£2) to W. Humphreys. Third Prize (£1) to W. Walker.
- Class 137.—Three Specimens of Cabbage, drawn from a crop of not less than two acres.—First Prize (£3) to F. S. Mee. Second Prize (£2) to G. Gadsby. Third Prize (£1) to J. A. Wright.
- Class 138.—Six Specimens of Kohl-Rabi, drawn from a crop of not less than two acres.—First Prize (£3) to P. Perry. Second Prize (£2) to The Walthamstow Urban District Council. Third Prize (£1) to A. Steel.
- Class 139.—Six Specimens of Kale, Marrow Stem, drawn from a crop of not less than two acres.—First Prize (£3) to W. Watts. Second Prize (£2) to R. Thomas. Third Prize (£1) to G. Gadsby.
- Class 140.—Collection of Roots, &c., for Cattle-Feeding in Winter. To consist of six specimens of not exceeding ten Varieties in as many distinct Types as possible.—First Prize (£5) to P. Perry. Second Prize (£3) to W. Watts. Third Prize (£2) to J. James.

#### INVENTIONS.

- Class 141.—Any New Apparatus or Invention relating to the Dairy Industry, or one Showing Distinct and Practical Improvement Especially as to Saving Labour, not eligible for competition in any other Class, and not previously exhibited in competition at the Dairy Show.—Gold Medal to R. L. Munday for Sanitary Glandless Pump. Silver Medal to Bratby & Hinchliffe, Ltd., for Crown Corking Machine; G. Sutherland Thomson & Co., for Butter Moulding and Wrapping Machine; Wallis Crown Cork Co., Ltd., for Wallis Safety Cap Seal; Milkfillers Ltd., for Automatic Filling Machine. Bronze Medal to Graham Enoch Manufacturing Co., Ltd., for "G.E.M." Bottle Filling and Capping Machine; G. S. Clayton for Bottle Filling and Measuring Machine.
- Class 142.—Small Plant for Washing and Sterilizing Bottles, and Suitable for Farmers with Herds not exceeding 30 Cows.—First Prize (£3 and Silver Medal to G. S. Clayton. Second Prize (£2 and Bronze Medal) to Barford and Perkins, Ltd.
- Class 143.—Small Ice Cream Equipment to deal with one to three gallons per hour, suitable for the use of Tenant Farmers and other small producers. No entry.
- Class 144.—Reffigerating Plant capable of reducing the temperature of Milk to not less than 40°F. Suitable for Farmers with Herds of 30 to 50 Cows. First Prize (£3 and Silver Medal) to A. G. Enock & Co., Ltd.

#### JUNKET-MAKING CONTESTS.

Class 145.—JUNKET MADE WITH MILK AND CREAM.

SECTION A.—First Prize (£2) to Miss M. West. Second Prize (£1) to Miss R. E. Mitchell. Third Prize (10s.) to Miss E. M. Mortimer.

SECTION B.—First Prize (£2) to Miss J. Ridler. Second Prize (£1) to Miss M. B. Mitchell. Third Prize (10s.) to Miss R. M. Gwillim.

SECTION C.—First Prize (£2) to Miss A. Turner. Second Prize (£1) to Miss E. Holloway. Third Prize (10s.) to Miss D. Cane.

Class 146.—Champion Contest.—Prize (Silver Medal) to Miss J. Ridler.

#### BUTTER-MAKING CONTESTS.

Class 147.—Open to those who have never won a Prize at any Show wherever held.

Section A.—First Prize (£3) to Miss I. Jaques. Second Prize (£2) to Miss L. M. French. Third Prize (£1) to Miss M. Johnston.

SECTION B.—First Prize (£3) to Miss D. V. S. Lamb. Second Prize (£2) to Miss K. Cragg. Third Prize (£1) to Miss M. A. Griffiths.

SECTION C—First Prize (£3) to Miss J. Seldon. Second Prize (£2) to Miss M. A. Hunt. Third Prize (£1) to Miss M. Martin.

- Class 148.—Open to Students who have attended Classes at the British Dairy Institute, Reading, for not less than one month during the past two years.

  —First Prize (£3) to Miss M. A. Hunt. Second Prize (£2) to Ralph Keen. Third Prize (£1) to Miss M. F. Griffiths.
- Class 149.—Open Contest for Men and Women.

SECTION A.—First Prize (£3) to Mrs. J. Bolderston. Second Prize (£2) to Miss K. Pendray. Third Prize (£1) to Miss L. L. Tombs.

Section B.—First Prize (£3) to Miss M. J. Salmon. Second Prize (£2) to Miss D. Cane. Third Prize (£1) to Miss H. Morgan.

SECTION C.—First Prize (£3) to Miss J. Seldon. Second Prize (£2 to Miss E. Challenger. Third Prize (£1) to Miss P. L. Mudd.

SECTION D.—First Prize (£3) to Miss R. L. Gwillim. Second Prize (£2) to Miss S. E. Gillson. Third Prize (£1) to Mrs. A. Morgan.

SECTION E.—First Prize (£3) to Miss R. E. Mitchell, Second Prize (£2) to Miss M. West. Third Prize (£1) to Miss M. L. Baker.

- Class 150.—Open to First Prize Dairy Show Winners of 1926.—First Prize (£3 and Silver Medal) to Miss R. E. Mitchell. Second Prize (£2) to Mrs. J. Bolderston. Third Prize (£1) to Miss R. M. Gwillim..
- Class 151.—CHAMPION CONTEST (open to Winners of First Prizes in the preceding Classes or at any Shows of the Birtish Dairy Farmers' Association, Champions of any year excepted).—First Prize (Gold Medal) to Miss J. Prichard. Second Prize (£3) to Miss M. K. Stratton. Third Prize (£2) to Miss R. E. Mitchell.

#### MILKERS' CONTESTS.

- Class 152.—Open to Men and Women of 18 years and over.—First Prize (£7) to Miss N. Jones. Equal Second Prize (£3 10s. each) to P. N. Dodd and J. Turnock. Fourth Prize (£2) to T. Povah. Fifth Prize (£1) to Miss J. Johnson.
- Class 153.—Open to Boys and Girls under 18 years.—First Prize (£7) to R. M. Peacock. Second Prize (£4) to Miss E. Maughan. Third Prize (£3) to Miss A. E. Chard. Fourth Prize (£2) to W. E. Bryant. Fifth Prize (£1) to Miss M. Brock.
- Class 154.—Champion Contest (open to First Prize Winners in preceding Classes or at the Shows of 1923, 1924, and 1925, of the British Dairy Farmers' Association, Champions of any year excepted).—Prize (Howard Cup, Gold Medal and £2) to Miss N. Jones.

#### COW-JUDGING CONTEST.

Class 155.—Open to Teams of Students from Agricultural Colleges, Farm Institutes and County Council Classes.—Prize (B.D.F.A. Challenge Bowl) to The Cornwall County Council and Bronze Medal to A. B. James, J. Ould and J. Pryor.

# THE OBJECTS OF THE BRITISH DAIRY FARMERS' ASSOCIATION

are the improvement of

DAIRY STOCK AND DAIRY PRODUCE,

by encouraging the Breeding and Rearing of Stock for the special purpose of the Dairy; a larger and better production of Milk, Butter, Cheese, and Eggs; the Erection of Improved Dairy Buildings, and the Invention of New or Improved Dairy Utensils, Machinery, Implements, and Scientific Appliances. The Association also stimulates the Breeding and Rearing of Poultry, &c. By means of Papers in the Society's Journal (published annually), Annual Conferences in different dairy districts, Lectures, and Discussions, and in other ways, efforts are continually being made to disseminate a more thorough knowledge of Dairy husbandry. Moreover, prompt action is taken by the Association for the protection of the interests of Dairy Farmers in the event of their being threatened by legislation or by Departmental Orders.

Prizes to the value of about £3,500 are annually offered for competition at the Dairy Show, held at the Royal Agricultural Hall, Islington, London.

It is difficult to over-estimate the importance and need of greater attention being paid to the Dairy industry. It is admitted that by improved modes of managing Milk and its products, the wealth obtained from the Milch Cows of the country could be increased most materially. The Council, therefore, appeal to Agriculturists of all classes, and Dairy Farmers in particular, to become Members of the Association, and practically aid in developing its usefulness.

The advantages of Membership comprise: -

- 1.—A free pass to all the Society's Dairy Shows, available each day during the Exhibition, with the privilege of admitting free (by ticket) a friend on any one day.
- 2.—The privilege of participating, at specially low charges, in the Dairy Conferences organized by the Association at home or abroad.
- 3.—The Exhibition of Live Stock, Dairy Produce, and Utensils (for competition) at a reduced scale of fees to Life Members, and to Annual Members subscribing £1 per annum whose subscription for the past year and current year is paid.
- 4.—A copy (free by post) of the Journal of the Association, published annually.
- Analyses by the Analytical and Consulting Chemist, at low fees, of samples of milk, cream, butter, cheese, feeding stuffs, water, soil, manures, &c., and advice on dairy matters connected with his Department.

- 6.—Professional advice and assistance at a reduced scale of charges in any case of disease among the live stock of the farm.
- 7.—Examinations of plants and seeds by the Consulting Botanist on specially low terms.
- 8.—Examinations by the Consulting Pathological Bacteriologist for particular pathogenic or disease-producing organisms.
- 9—Investigations by the Consulting Dairy Bacteriologist into the cause of trouble or taints in dairy produce.
- 10.—In any case of apparent hardship in connection with the administration of the Model Milk Clauses, Members are recommended to at once send details of such case to the Secretary, who will submit the the matter to the Committee appointed to deal with such matters, after which advice and assistance will be given by the Association.

The Annual Subscription is £r, but Dairy Instructors and Students are admitted on payment of ios. 6d. per annum. The latter sum entitles Dairy Instructors to all privileges, except the reduced fees for exhibition at the Shows.

#### Members' Chemical Privileges.

Free Analysis.—Each member, whose subscription for the current year is paid, is entitled to one analysis of a dairy product (paragraphs I to 9 below) free of charge. A stamped addressed envelope must be forwarded with the sample for the return of the report of the analysis.

Further analyses will be made by the Association's Consulting Chemist at the following reduced fees:—

I.—MILK (Fresh).  Estimation of Fat and Total Solids Estimation of Fat, Casein, Albumen, Sugar, and Ash		0	s. I	0
2.—MILK (Sour).				
Estimation of Fat and Total Solids		0	5	0
3.—SKIMMED MILK.				
Estimation of Fat and Total Solids	•••	0	5	0
4.—CONDENSED MILK.				
Estimation of Fat		0	5	0
Estimation of Fat, Casein, and Solids				
Estimation of Cane Sugar (extra)	•••			ŏ
<b>~</b> , ,	•••	~	J	~
5.—HUMANISED MILK.				
Complete Analysis		I	1	0
6.—CREAM.				
Estimation of Fat		^	5	0
Estimation of Fat, Casein, and Solids			12	
Transferation for Francisco D ( )	•••			-
	•••	U	10	O
7.—BUTTER.				
Estimation of Water, Fat, Casein, and Ash		0	10	0
Examination for Foreign Fats (extra)		0	10	.6
8—CHEESE.				
Estimation of Water, Fat, Casein, and Ash		_		6
Framination for Familian Esta (sector)	•••			-
	•••	0	10	0
9.—RENNET.				
Examination of Strength	•••	0	5	0

ro.—CAKES AND MEALS.  Estimation of Oil only  Estimation of Oil, Albuminoids, Carbo-hydrates, &c	, o	, s. 5	0
II.—GRASS, SILAGE, ROOTS, &c. Estimation of Oil, Albuminoids, Carbo-hydrates, &c	. 1	: 10	o
Estimation of Citric Soluble Phosphoric Acid Estimation of Nitrogen	. 0	7 7 7 5	6
I3.—SOIL.  Estimation of Lime	2	5 2	0
14.—WATER. Analysis for Drinking or Dairy Purposes	r	r	0
Examination of a Substance for Mineral Poisons Examination for Organic Poisons (Alkaloids, &c.)	2	2 3	0
	0	7 15	6
77 11 11 A 17 11 11 A 77 1 A 1 7	0	2 10	_
18.—CONSULTATION.	0	Free	e 6
Note.—The Consulting Chemist will be prepared to quote terms to members requiring a number of analyses at f	redi	rced	Ŭ

Instructions for Taking Fair Samples for Analysis.

intervals.

Dairy Produce.—Milk should be sent in a well-corked 8-oz. clear bottle. The milk should quite fill the bottle. Butter or cheese, about 8 ounces; the former in a gallipot well tied down.

Soils.—A block of soil about four or five inches square, and nine inches deep, should be sent in a strong box by rail.

Artificial Manures.—Take a handful of manure out of at least half a dozen bags, mix these rapidly and thoroughly, breaking down all lumps. Forward about a pound of the mixture in a tin box, and retain the remainder. Samples of manure should be sent immediately after the delivery of the bulk, and before settling the account. All manures should be bought subject to analysis.

Feeding Materials.—Feeding cakes, meals, or grains: about a pound should be sent in a bag or box. Grass and hay: a bundle of a few pounds weight. Silage: a six-inch cubic block, packed closely in a box to keep it compressed.

Waters.—A Winchester quart glass-stoppered bottle should be procured from a druggist, well washed out with the water, then completely filled, the stopper tied securely down, and the bottle packed in a box and sent by rail.

N.B.—In order to prevent disappointment, the Chemist requests that, as far as possible, Members desiring to hold a personal consultation should make an appointment by letter. Between 10 and 4 are the hours most convenient. The fees for analyses of artificial manures and feeding stuffs are only applicable to Members who are not commercially engaged in their manufacture or sale. All communications intended for the Analytical and Consulting Chemist must be addressed direct to Dr. T. J. Drakeley, Ph.D., M.Sc., F.I.C., F.C.S., M.I.M.E., 28, Russell Square, London, W.C.I.

#### Members' Bacteriological Privileges.

Samples of dairy produce, &c., submitted for a bacteriological count, or for examination for Bacillus Coli, &c., should be forwarded to Dr. T. J. Drakeley, Ph.D., M.Sc. F.I.C., F.C.S., M.I.M.E., 28, Russell Square, W.C. 1.

Examinations will be made at the following fees:-

MILK.	£	s.	d.
Bacteriological Examination of "Certified," "Grade A." or	~		
"Pasteurised" Milk under the Milk (Special Designations)			
Order, 1922	0	10	6
Cultural Examination for a particular organism	2	2	0
CREAM, BUTTER, CHEESE.			
Cultural Examination for a particular organism	2	2	0

#### Directions for Sending Samples.

Samples of milk (one pint) and cream (half pint) should be forwarded in wide-mouthed stoppered bottles which have previously been thoroughly cleaned, and then rinsed several times with very hot, almost boiling, water.

Butter is best sent in a  $\frac{1}{2}$ -lb brick or roll, just as it was made up, wrapped in grease-proof paper, and packed in a box.

If the *Cheese* is small, send a whole one; otherwise forward a square block of not less than one pound, and not a wedge-shaped piece. Wrap in grease-proof paper and pack in a box.

All samples should be sent by the speediest method possible They ought not to arrive either on Saturday or Sunday.

#### Examinations for Pathogenic Organisms.

Samples to be examined for disease-producing organisms should be forwarded to Dr. Andrewes, Pathological Laboratory, St. Bartholomew's Hospital. London, E.C. I. Members are requested to note that in the case of examination for the tubercle bacillus the method of animal inoculation, which experience has shown to be the only reliable one, will be alone used. It is impossible to carry out the process of sedimentation necessary for the detection of tubercle bacillus in milk which is received in a curdled condition. The report cannot be sent for a period of four to six weeks from the time the sample is received, but in the case of other pathogenic organisms the time required is much shorter.

Examinations by Dr. Andrewes, Pathological Labora	ito	rу,	
St. Bartholomew's Hospital, London, E.C. 1.			
MILK. Cultural and experimental examination for a particular patho-	£	s.	d.
genic organism	2	2	0
PASTEURISED OR STERILISED MILK.  Cultural and experimental examination for a particular pathogenic organism	ı	r	0
CREAM, BUTTER OR CHEESE.  Cultural and experimental examination for a particular pathogenic organism	2	2	0
WATER. Cultural and experimental examination for a particular pathogenic organism	2	2	o
Members' Veterinary Privileges.			

#### embers' Vetermary Privneges.

Members of the Association who require professional assistance in any case of disease among their animals must apply direct to the Consulting Veterinary Surgeon, Professor G. H. WOOLDRIDGE. Royal Veterinary College, Camden Town, London, N.W. r. whose scale of charges is as follows:-

								£	s.	d.
Personal Consultation	•••	•••	•••	•••	•••	•••	•••	0	IO	б
Post-mortem Examination	n and	Repor	t	•••		•••	***	0	10	6
Consultation by Letter		•••	•••	•••	•••	•••	•••	0	5	0
Visit and Report, in case	of an	outbre	ak of	disease	, in ad	dition	to			
personal and travel	lling e	xpense	s, per o	day	•••	•••	••	2	2	0

#### Members' Botanical Privileges.

The Council have fixed the following rates of charge for the examination of Plants and Seeds for the bonå fide and individual use and information of Members of the Association (not being Seedsmen), who are particularly requested to mention the kind of examination they require, and to quote its number in the subjoined Schedule.

No.  I.—A Report on the purity, and amount or nature of foreign	£	s.	d.
materials, of a sample of seed	0	1	0
2.—A Report on the perfectness and germinating power of a sample			
of seed	О	I	О
Nos. 1 and 2 together	0	1	6
3.—Determination of the species of any weed or other plant, or of any epiphyte or vegetable parasite, with a report on its habits, and the means for its extermination or prevention	0	т	0
nables, and the means for its externimation of provincion	•	•	•
4.—Report on any disease affecting farm crops $\hdots$ $\hdots$	0	ı	0
5.—Determination of the species of a collection of natural grasses found in any district, with a report on their habits and			
pasture value	О	4	0

#### Instructions for Selecting and Sending Samples.

The utmost care must be taken to secure a fair honest sample. When possible, at least one ounce of grass and other small seeds should be sent, and two ounces of cereals or larger seeds. Grass seeds should be sent at least four weeks, and clover seeds two weeks before they are to be used. In collecting specimens of plants, the whole plant should be taken up, and the earth shaken from the roots. If possible, the plant must be in flower or fruit. They should be packed in a light box, or in a firm paper parcel. Specimens of diseased plants or of parasites should be forwarded as fresh as possible—either in a bottle, or packed in tinfoil or oil silk. All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstance (soil, situation, &c.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

The charge for examination must be paid, in Postage Stamps or otherwise, at the time of application, and the carriage of all parcels must be prepaid. It must be distinctly understood that no notice can be taken of any application unless it is accompanied by the proper fee.

#### THE BRITISH DAIRY INSTITUTE, READING.

The British Dairy Institute was established at Aylesbury in 1888, by the British Dairy Farmers' Association, and several hundred Students were successfully trained there in different branches of dairy work. In order that Students might have an opportunity of combining with the practical study of dairying a more complete scientific instruction, the Institute was, in 1896, moved to Reading, and placed under the management of a Committee representing the British Dairy Farmers' Association and the University College, Reading.

The Institute contains large milk-receiving, butter-making, and milk-testing rooms; rooms for the manufacture of pressed, unpressed, and soft cheeses; and rooms for the ripening and drying of different varieties of cheese; besides reading, lecture, and common rooms. It is equipped with the best modern apparatus for the manufacture of dairy produce, including power-driven separating and butter-making

plant, and cold storage plant.

The instruction given is both practical and theoretical, and is arranged to suit the requirements of those who need either elementary or advanced dairy instruction, or who wish to perfect themselves in the manufacture of any special variety of dairy produce. Instruction is provided for students who wish to specialize in Bacteriology or Chemistry applied to dairying.

The Institute is open throughout the year, except during the Winter Vacation of eight weeks, which commences about the middle

of November.

The Courses at the Institute are open to men and women above the age of 16 years. Students may join at any time while the Institute is open, and for any period not less than a week, but those who desire to take a thorough short course in butter-making or cheese-making are recommended to attend the Six Months' or Three Months' Joint Course in Dairying.

The manufacture of hard-pressed and soft cheeses is taught during the whole of the time when the Institute is open, but Stilton and other

blue-veined varieties are not made until May.

Instruction is given in butter-making, clotted-cream making, the testing and analysis of milk, the management of various types of separators, the handling and care of milk, and the preparation of starters, &c. Lectures and demonstrations are usually given in the afternoons, the mornings being chiefly devoted to practical dairy work.

Practical and theoretical instruction in butter-making and cheese-making (including hard-pressed, blue-veined, and soft cheese), £1 per

week; £10 for three months; £18 for six months.

Practical and theoretical instruction in butter-making only, 10s.

per week (or part of week).

A full Prospectus will be sent on application to the Secretary, British Dairy Institute, Reading.

FRED J. BULL, Secretary, B.D.F.A.

28, Russell Square, London, W.C. 1.

Fifty-first Half-yearly Report of the Council presented to the Members at the Meeting held at the Dairy Show, Royal Agricultural Hall, Islington, N. 1, on Wednesday, October 20th, 1926.

As will be seen from the attached Table, the entries for the 1926 Dairy Show are in excess of last year. There is a notable increase in the entry of Cheese, whilst the entry of Colonial Produce is the highest on record. Although Goats are 40 in excess of 1925, there is a slight decrease in the number of Cattle. New Inventions are again to the fore, and every inch of space for non-competitive exhibits has been reserved since last June.

The Annual Conference, which was to be held in France and to coincide with the International Dairy Congress in Paris, encountered obstacles at the outset. Nevertheless, a compact party had been gathered together for the tour when the Great Strike was launched, and in the period of uncertainty thus brought about the Council felt that the wisest course was to abandon the project.

In view of the fact that International Dairy Congresses have been found to be of the greatest value to the Industry in the countries in which they have been held, and that if such a Congress was to be held in this country it must be in 1928, your Council has taken active steps to promote a Congress for that year.

It is satisfactory to report that a Committee has been appointed with representatives from all branches of the Industry, the necessary Sub-Committees have been set up and invitations to attend the Congress are being sent out. The programme will include Paper-reading Conferences, visits to many dairying centres in Great Britain and Ireland and to centres where the methods of handling milk and of manufacturing milk products may be studied.

His Majesty The King has graciously consented to be the Patron of the Congress.

The members of the British Dairy Farmers' Association will be

glad to know that the organisation of the Congress will be carried out from the Offices of their Association.

The success which last year attended the Association's Stand at the Dairy Show has justified the Council in repeating the experiment, and it is hoped that a record number of members may thus this year be obtained. If each member does his or her best, satisfaction is assured.

The insatiable Reaper has dealt a double blow this year at the Industry, for ere the mind had realised the loss of that great pioneer, John Benson, Miss Dora G. Saker had sickened and been gathered in. To fill the vacancy on the Council caused by Mr. Benson's death, Mr. W. H. Hobson, of Nantwich, was elected by the Council, but as his period of Office expires this year you will note his name among those for re-election.

This year the Association is fortunate in that The Rt. Hon. Lord Kenyon, K.C.V.O., has kindly allowed his name to be submitted as President-elect, 1927, and in support of his election your vote will shortly be sought.

The following list of Vice-Presidents has been prepared and for which your approval will be asked:—-

The Marquis of Crewe, K.G., Crewe Hall, Crewe.

Earl of Dartmouth, P.C., Patshull, Wolverhampton.

Viscount Elveden, C.B., M.P., 11, St. James's Square, S.W.1.

Lord Strachie, Sutton Court, Pensford, Bristol.

Major Lord O'Hagan, 16, Eaton Square, S.W.1.

Lord Desborough, G.C.V.O., Taplow Court, Taplow, Bucks.

Lord Bledisloe, P.C., K.B.E., Lydney Park, Glos.

Sir Gilbert Greenall, Bart., C.V.O., Walton Hall, Warrington.

S. Palgrave Page, J.P., 27, Oakwood Court, W.14.

G. Titus Barham, Sudbury Park, Wembley, Middlesex.

S. R. Whitley, J.P., Rookwood, Shinfield, Reading.

Major J. A. Morrison, D.S.O., Basildon Park, Reading.

In accordance with the Articles of Association the following members of the Council retire this year:—

Lt.-Col. Sir Merrik R. Burrell, Bart., Sussex.

S. Edwards, Monmouth.

J. T. H. Farmer, Bucks.

W. J. Grant, Monmouth.

W. H. Hobson, Cheshire.

W. F. Jessop, Oxon.

R. Long, Bedfords.

W. Nisbet. Lanarks.

H. S. Holmes Pegler, Surrey.

James Sadler, Cheshire.

J. Gillard Stapleton, Middlesex.

T. Willing, Devon.

With the exception of Sir Merrik R. Burrell, Bart., all are seeking re-election. However, the retirement, through ill-health, of that veteran, Mr. Primrose McConnell, creates a second vacancy, and in the filling of these two places members have the following choice:—

Grosvenor Berry (Dairy Farmer), Withers, Mount Bures, Bures, Suffolk, proposed by Mrs. Evelyn, seconded by Mrs. Ames.

Isaac Bidwell (Wholesale Provision Merchant), 61, Charterhouse Street, E.C.1, proposed by West Surrey Central Dairy Co., seconded by W. G. Lovell.

George F. Gosney (Secretary, National Association of Creamery Proprietors), Aldwych House, Aldwych, London, W.C.2, proposed by Alfred Rowntree, seconded by John Anderson.

Roger Fletcher Hearnshaw (Farmer), Fox Hill, Burton Joyce, Notts, proposed by S. Palgrave Page, J.P., seconded by Lt.-Col. Caddick.

William Rice (Secretary, Poultry Club), 3, Ludgate Broadway, London, E.C.4, proposed by Lord Dewar and C. N. Goode, seconded by Sir Gilbert Greenall, Bart., and Charles E. Brooke.

Mr. Herbert J. Page, of Messrs. Kemp, Chatteris, Nichols, Sendell & Co., will be proposed as the Association's official Auditor, with Messrs. P. Hay, H. E. Hughes, and W. E. Manchester, J.P., as Hon. Auditors.

By order of the Council,

B. RAVENSCROFT,

Secretary.

28, RUSSELL SQUARE,

LONDON, W.C.1.

October, 1926.

THE FOLLOWING TABLE GIVES COMPARATIVE DETAILS OF THE ENTRIES AT THE DAIRY SHOW WITH THOSE OF THE PAST TWELVE YEARS.

	139	1911.	1912.	1913.	1914.	1915.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.
Cattle	67	222	210	286	234	204	292	384	455	515	539	473	470	449
Milking and Butter Tests .		213	500	265	167	198	334	492	614	760	772	718	700	693
	:	81	105	110	85	116	115	109	101	91	67	7.5	<del>1</del> 8	78
	3,300	-	3,350	3.840	3,089	2,653	2,736	4,317	4,398	4,398	4,685	4,498	4,355	4,352
:	2,9	2,226	2,496	2,467	2,291	2,735	2,760	3.259	3,272	3.208	3,115	3,027	3.094	3,180
:	.:	249	343	395	301	271	342	462	90+	418	488	486	459	489
Bacon and Hams	;	58	71	68	67	45	1	34	56	87	88	113	95	<del>1</del> 6
Butter	:	181	819	549	371	339	242	286	322	388	101	483	420	<del>1</del> 30
Cream	;	26	48	43	27	20	16	19	32	37	33	30	47	30
Skim-milk Bread, &c.	;	75	83	<del>1</del> 9	46	65	0#	0+	No class	No class	No class	No class No class No class No class No class No class	No class	No class
Honey, &c	:	87	95	106	126	17	50	49	. 63	58	92	102	53	65
Bottled Fruits and													ine .	
Vegetables	:		1	-	-	1		45	25	56	53	65	33	56
New and Improved		atrone.												
Inventions		21	25	11	24	9	23	14	38	30	37	37	54	э <u>́</u>
Roots	-	172	190	190	59	51	98	144	148	183	190	283	569	271
Buttermaking Contests .	:	165	165	141	97	101	110	98	162	1+1	129	154	130	131
Milkers' Contests		153	119	137	85	85	17	98	86	#	43	56	$\tilde{5}1$	11
Junket-making Contest Collection of Colonial Pro-	: ,		1	-	1			1~	œ	E	65	65	27	e1 80
duce	:		I	1	1	1		¢1	¢1	က	ಣ	_	<b>ः।</b>	5
ontest	· •					1	1		I		1-	<del>-</del> #	80	10
Collection of Produce				1	1	-		1	1			∞	18	6
	1	7,529 8	8,127	8,723	7,069	6,963	7,187	9,829	10,150	10,399	10,766 10,643	10,643	10,333   10,464	10,464
	1	-												

# FIFTY-FIRST ANNUAL REPORT OF THE COUNCIL

For the Year ended 31st December, 1926,

To be presented to the General Meeting of Members on Wednesday, March 2nd, 1927.

In submitting this fifty-first Annual Report and Statement of Accounts, the Council is again pleased to record the continued success of the Association, both as regards Membership and Finance. At the close of the year the Membership totalled 1,714, of which 1,564 were Annual and 150 Life Members, together with 19 Affiliated Societies. Whilst these figures show an increase of 91 Members and four Affiliated Societies, it is sincerely hoped that each Member will introduce a friend during the coming year and so place the Association on a still firmer basis.

During the year the constitution of the Council has been changed by the lamented death of Mr. John Benson and the retirement of Lt.-Col. Sir Merrik R. Burrell, Bart., and Mr. Primrose McConnell (the latter unfortunately through ill-health). To fill these vacancies Mr. Grosvenor Berry, Mr. R. Fletcher-Hearnshaw and Mr. W. H. Hobson have, by the votes of Members, been elected to the Council.

Appended to this Report is the Financial Statement which may be regarded as highly satisfactory. The Invested Funds being £14,335, which is an increase of £3,000 over last year.

The Dairy Show, which is one of the outstanding features of the Association's activities, was again a complete success, both entries and visitors exceeding those of last year.

The Council, being of opinion that there should be a Championship Trophy for Cattle at the Dairy Show, decided to award a Supreme Individual Championship Challenge Trophy provided from the Association's funds, and this was offered for the first time this year.

All animals, irrespective of being milked thrice or twice daily, competed for all Trophies and Prizes and in most cases those milked thrice were successful.

As a result of Examinations held at the British Dairy Institute, Reading; Studley College, Warwickshire; East Anglian Institute, Chelmsford; and Gannington Court Farm Institute, Bridgwater; 34 Diplomas, with Silver Medals, 66 Butter-making and 56 Cheese-making Certificates have been awarded.

The Medal Distribution Scheme still remains popular, as will be observed from the following table which gives particulars of Medals granted last year:—

3	Gold.	Silver.	Bronze.
Dairy Cattle	 -	8	7
Produce	 NAME AND ADDRESS OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY O	$^2$	4
Butter-making	 Marine of	3	1
Clean Milk Competitions	 5	1	1
Cow Judging Contests	 	1	3
Dairy Herds Competition	 	1	1
Milkers' Contests	 -	2	$^2$
		Wattenday	
	5	18	19

It is pleasing to report that the Committee which was appointed with representatives from all branches of the Dairying Industry to draw up a programme for the International Dairy Congress to be held in this country in 1928 is still very active in its endeavours to make the Conference a great success.

Mr. J. Gillard Stapleton having kindly presented a Cup to the Association to be used as an instrument to encourage improved methods of milk production in the Counties of England and Wales, the Council decided to institute an Inter-County Clean Milk Competition, the Cup to be held for one year by the County making the greatest progress. In addition £109 is being offered by the Association in money prizes, and it is pleasing to report that 18 counties have decided to compete.

The Council has given further consideration to the question of Tuberculin Tested Cattle at the Dairy Show, and is now ascertaining the views of the various Breed Societies upon the matter.

It is, with deep regret, the Council has to announce the death of the Secretary, Mr. B. Ravenscroft, who passed away on December 13th. Mr. Ravenscroft joined the Association in 1881 and was elected to a seat on the Council in 1907, which position he held until undertaking the Secretarial duties in the early part of the Great War. For many years he acted as the Association's Hon. Auditor, and also undertook the duties of Finance and Refreshment Steward at many Dairy Shows. His genial presence, sound judgment, foresight and great experience in finance will be greatly missed from the Council Chamber and Office.

By order of the Council, FRED J. BULL, Secretary.

#### The British Dairy

#### FINANCIAL

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#### GENERAL INCOME AND EXPENDITURE

WITH COMPARATIVE

		I	EXPEI	DIT	UR	E.	_					
								926		192		
Education and Ex	aminat	ions	•	£	s.	d.	£	s.	d.	£ s.		
Reading $\dots$	•••	•••		205	4	1				194 2		
Chelmsford				15	3	0				13 1		
Studley		• • •	•••	12	11	8				14 19	0	)
Somerset		•••		12	16	$^{2}$				12 5	2	3
												-
				-			245	14	11	234 8	3 2	<u>-</u>
Journal							572	16	0	582 12	3 8	3
Medal Scheme							70	14	0	28 10	) 4	Ł
Bank Charges							30	9	4	24 14	L 4	Į
Rent							240	0	0	240 (	) (	)
Prizes to Exhibito							3,524	8	11	3,603 19	11	ĺ
Sales of Exhibits		•••					1,461		6	1,363 13		
Dairy Show—Hire				Posta	re a		-,		-	_,		-
Sundry Expe					50 4		6,978	9	3	6,791	£ (	)
Catalogues	посы						945	-	6	888 1		
Salaries							1.072		4.	1,080		
Wages and Labou				•••		•••	1,689	2	7	1,663		
Printing, Statione							1,000	_	•	1,000	, ,	,
	•	_	and Di	ilidi y	OII	100	275	6	6	275 12	2 ]	ı
Railway Fares for	Attend	···	t Cour	oil Ma	atir		179	ĭ	7	169		-
Auditors' Fees an					SCUL	 	129		4	157 1	-	-
Depreciation of F				1.000			25		8	24		-
Income Tax, 1925							26		0	36		
Donations—	()	•••	•••	£	s.	d.	20		U	50 ,	, (	,
National Inst	itato f	on Dos	ooroh	T.	۰۰.	u.						
										1,000	) (	1
in Dairy: International		Clanim	***	200	0	0				1,000	, ,	,
British Dairy				100		0						
				50		0						
National Mill	a Fubii	Danas	rolont	50	U	O						
Royal Agric				10	10	0				10 10	) (	1
Society	f Dood	 ina T:	h		0	0				10 10	, (	,
University o Central Chan	L Leau	mg m	Drary	5	-	0				5 (	) (	
Central Chan	nber or	Agrico	noure	9	U	U					, (	-
							375	10	0	1,015 1	) (	) -
Corporation Duty	v						$^{32}$	13	5	82	) {	3
Stands at Agricul	tural S	hows					40	0	Ö	1		3
Entry Fees return				tand	Mo	ath		•	•		- `	
Disease							11	10	0	65	) (	)
Conference Accou	mt			•••				10	5		٠,	-
BALANCE, being e					ndit	ure	1,846		7	792	3 6	3
zammoz, come o											• '	-
							£19,794	7	10	£19,222	2 /	5
												100

### Farmers' Association.

#### STATEMENTS.

ACCOUNT for the Year ended December 31st, 1926.

Cr.

STATEMENT FOR 1925.

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							£	3.	d.	£	8.	
Subscriptions							1,396	7	3	1,436	8	
Examinations-				£	s.	d.						
Reading				74	7	6				79	5	
Chelmsford				15	3	0				13	1	
Studley				12	11	8				14	19	
Somerset				12	16	2				12	5	
											-	
							114	18	4	119	10	
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Journal		•••	•••	•••		•••	115		7	149	6	
Contributions to I	rize E	2227						- 4		419		
				• • •	_	•••	374	4	()		17	
Entry Fees, Comp	petitive	and N		mpetit	ive		9,348	16	9	9,079	12	
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We have audited the foregoing Statement of Assets and Liabilities and the Income and Expenditure Account with the books and accounts of the Association. We have received all the information and explanations we have required. In our opinion such Statement of Assets and Liabilities is a full and fair statement containing the particulars required by the Regulations of the Association, and properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs according to the information and REFORT OF THE AUDITORS TO THE MEMBERS OF THE BRITISH DAIRY FARMERS' ASSOCIATION. (Signed) HERBERT J. PAGE, Chartered Accountant, 36, Walbrook, explanations we have received and as shown by the Books.

- Auditors.

London, E.C. 4

W. E. MANCHESTER. PERCY T. HAY, H. E. HUGHES,

26th January, 1927.

# British Dairy Farmers' Association.

#### MEDAL SCHEME.

# Special Prizes at Educational Institutions and Country Shows.

The Council of the British Dairy Farmers' Association is prepared to consider applications from Educational Centres and Approved Societies in the United Kingdom for their Gold, Silver, and Bronze Medals to be awarded in connection with dairying and dairy farming under the following conditions, viz.:—

- All applications must be made on our official form and must clearly state the object for which the Medal or Medals are required.
- 2. Only one application from any Institution or Society can be considered in any one year.
- 3. The application must be repeated annually if Medals are again required.
- 4. A copy of the Proposed Prize List, showing the Conditions of the Award of the Medal and the name of the judge, should accompany the application, and the offer of a Medal cannot be confirmed until the Prize List has been approved.
- 5. The British Dairy Farmers' Association stipulates that no entry fee shall be charged in respect of these Medals, they being offered as Special Extra Prizes.
- 6. Notification of the award, with the winner's full name and address, to be forwarded to the Secretary, British Dairy Farmers' Association, 28, Russell Square, London, W.C.1, within 14 days of the award being made.
- A person may not receive more than one Medal under this Scheme for the same subject or exhibit during any one year.
- STUDENTS.—The B.D.F.A. Silver Medal for Students is reserved for those who have obtained the B.D.F.A. Diploma.

- The B.D.F.A. Bronze Medals may be awarded on application to Students gaining the first position in short course Examinations and the prospectus of the course must be forwarded with the application for the Medal.
- DAIRY PRODUCE AND BUTTERMAKING.—The B.D.F.A. will consider applications on behalf of County or similar Shows for a Silver Medal as a Championship award.
- The B.D.F.A. Bronze Medals or Certificates may be available for local Shows, and in each case shall only be awarded to the best exhibit or competitor.
- CATTLE.—The B.D.F.A. Silver Medals will only be awarded at County and similar Shows to cows or heifers' milk recorded under the Ministry of Agriculture Scheme.
- The B.D.F.A Silver Medals will only be awarded to Bulls out of recorded cows.
- The B.D.F.A. Bronze Medals for cattle will be available only at Local Shows under similar conditions.
- CLEAN MILK COMPETITIONS.—The B.D.F.A. Gold Medal may be available, on application, to the winner of clean milk competitions of six months or more duration. Silver Medals for clean milk competitions of shorter duration.

In the event of any dispute as to the interpretation of these Rules, the Council of the British Dairy Farmers' Association reserves full power of decision, and in the event of the Medal not being awarded in accordance with the above Rules and Conditions, the Council reserves the right to withhold the Medal altogether.

# AWARDS DURING 1926.

	Chom or			
Applicant.	Examination held at	Date.	Medal.	Winner and Object,
Somerset County Council	Somerset	1st Nov., 1925—	Gold .	H W. W. Hoskyns, winner of Clean Milk Competition for Dairy Herds of 20 Cows and over
8 8	:		Gold	S. Webber, winner of Clean Milk Competition for Dairy Herds
Kent Education Committee	Kent	1st Nov., 1925—	Gold	South Eastern Agricultural College, winners of Clean Milk Competition
East Devon Milk Recording Society	Devon	1st Oct., 1925—	Silver .	F. B. Imbert-Terry, Jersey Cow. "Blue Hayes Baff," as giving highest vield of Buffer Fat.
Yorkshire Agricultural Society	Yorks	1st Jan., 1926—	Gold	
Hertfordshire County Milk Recording	Herts	1st Jan., 1926—	Gold	J. P. Morgan, winner of Clean Milk Competition.
Society  Buckinghamshire County Council	Bucks	1st Mar., 1926—	Silver .	G. J. Beckett, winner of Clean Milk Competition (Champion-
: : : : : : : : : : : : : : : : : : : :		31st May, 1926 " "	Bronze	G. S. Willards, winner of Clean Milk Competition (other than
Port Elizabeth Agricultural Society	Port Elizabeth	Mar 16—19	Silver	P. B. B. Naude, Friesland Cow "Hugenoot Aletta," gaming history and a name and a name of the second and a name in Malitim Triels for Received Animals.
Somerset County Agricultural Association	Wells	May 18—20	Sılver	Хr
: :	:	;	Bronze	Capt P. D. A. Courtenay, Shorthorn Bull, "Brent Barrington Capt P. D. A. Courtenay, Shorthorn Bull, "Brent Berrington Courtenay, Shorthorn Bull on the Recorded Cour.
Nealmpton Agricultural Association	Yealmpton	June 2	Bronze	Miss D. Cane Butter, as best exhibit of Butter or Cream, Viss T. V. Cookman. Champion Buttermaker
Royal Coluities Astronomal Source, Suffolk Agricultural Association Darwen and District Agricultural Associa-		June 3—4	Bronze	Äm
tion Three Counties Agricultural Society Gloucest Cambridgeshire and Isle of Ely Agricultural Wisbech	Gloucester	June 8—10	Silver	Duchess, as best Mik Recorded Dany Cow or Heirer, Miss F. Eckley. Champion Butternaker F. H. Thornton, Shorthorn Cow. "Knugsthorpe Countess
Society Royal Cornwall Agricultural Association	Launceston	June 9 and 10	Silver	Ruby 4th." as best Mik Recorded Dany Cow or Heirer, R. J. Dimestan, South Devon Cow, "Porloe Snowdrop," as the Wilt Recorded Cow eating highest points in Miking
Staffordshire Agricultural Society	Wolverhampton	Wol'erhampton June 16 and 17	Silver	G.
	· .	:	Bronze	ů.

# AWARDS DURING 1926.—Continued.

. Applicant.	Show or Examination held at	Date.	Medal,	Winner and Object.
Sussex County Agricultural Society	Eastbourne	July 14 and 15,	Sılver	F. J. Cornwell and Sons. Shorthorn Cow, "Strawberry," as
Buntingford and District Agricultural	Hertford	July 15	Brouze ,	BrigGen, Viscount Hampden, Shorthorn Cow, "Princess,"
Yorkshire Agricultural Society Bredon and District Agricultural Show	Harrogate Bredon	July 21—23	Silver Bronze	as best, Aulk Accorded Dany Cow or Archer. Miss A. Ward. Champion Buttermaker. W. C. Spencer & Son Shorthorn Cow, "Bushlea Tellurian
Tring Agricultural Society	Tring	Aug. 5	Silver	G. Holt-Thomas British Friesian Heifer, "Northdean
Penrith Agricultural Society	Penrith	Aug 10	Bronze .	John Smith Shorthorn Cow, "Pride," as best Milk Recorded Day.
Penistone Agricultural Society Glannau Erch Agricultural Society	Penistone	Aug. 19 Sept. 3	Bronze	Mas M. F. Trumigham Best exhibit of Butter F. C. Minopino. Weish Black Cow, "Tacochion 3rd," as
		:	Bronze	Dest Allik Kecordea Dany Cow or Herier. Sir C. A. E. T. C. Meyrick, Bart. Weish Black Bull. "Showdon Bran," as best Dany Bull out of a Milk Recorded
Young Farmers' Clubs	Dairy Show, Islington	Oct. 19—22	Silver	Cow. Miss M Harriott. Highest score in Cow Judging Contest.
			Bronze .	I, Cornford. Second highest score in Cow Judging Contest.  J. Harper Equal Third, highest score in Cow Judging Contest.
Lancashire Cheese and Darry Show Assoc. Somerset and North Dorset Milk Recording Association	Preston Somerset and North Dors	Oct. 26 Nov. 1	Bronze . Bronze . Silver	
Gloucestershire Root, Fruit and Grain Gloucester	Gloucester	9	Bronze Silver	A. H. Tarr. Second place in Dairy Herds Competition Mrs. N. H. Barton Best exhibit of Butter.
Oxfordshire Agricultural Committee	Oxfordshire	Nov	Sılver .	A. Collins, First place in Milkers' Contest for Competitors
		:	Silver	over 18 years. Miss M. Brock. First place in Milkers' Contest for Competitors innder 19 moor.
		:	Bronze .	J. Farin Second place in Milkers' Contest for Competitors
	i a	:	Bronze	H. Hopkins, Second place in Milkers' Contest for Competitors under 18 years.

# PRIZE ESSAY ON A DAIRYING SUBJECT.

The Council offers a Prize of £10 and the B. D. F. A. Silver Medal for an Essay upon any practical or scientific subject relating to Dairy Farming or Dairying, conditionally upon sufficient merit being shown.

Preference will be given to one based on the original work and experience of the writer. Where the work of others is relied upon, full references must be given, either in footnotes or by numbers (1), (2), &c., with a list of authorities at the end.

The Essay should not exceed 5,000 words, and must be received by the undersigned on 1st December, 1927.

An Essay must be sent in a sealed envelope, bearing a nom de plume, and in another sealed small envelope, also bearing the nom de plume, the Author must insert his name and address.

The Prize Essay will be the property of the Association. Others will be returned to their respective Authors, but the Association reserves the right to retain Essays on subjects suitable for inclusion in the Annual Journal, which will be paid for at the usual rate for literary contributions.

FRED J. BULL,

Secretary,
28, Russell Square, London, W.C. 1.

# British Dairy Farmers' Association.

# Suggestions to Farmers as to how best to ensure $_{\scriptscriptstyle \mathrm{THE}}$

#### CLEANLINESS OF THE MILK SUPPLY.

The attainment of a clean milk supply is largely dependent

upon the action of Dairy Farmers themselves.

Every Dairy Farmer is financially interested in this question. Public doubt of the cleanliness of the milk supply means reduced demand for fresh milk. Public confidence means increased use of milk as food and drink—consequently a larger demand.

Any Dairy Farmer by want of reasonable care can jeopardise the reputation of the whole industry and thus destroy the good work of those whose efforts are to increase the consumption of milk.

The co-operation of every producer is confidently requested.

The main points to be emphasized are :-

- (1) That consumers are entitled to receive milk which is clean and whole-some.
- (2) That the precautions necessary to produce clean wholesome milk are easy, simple and inexpensive.

Briefly these precautions are:—

- To keep the milk sheds and cows as clean as possible.
- To clean the udders and, before milking, wipe them with a clean damp cloth, rinsed after every cow.
- To use a partly covered milking pail.
- To see that milkers milk with clean hands.
- To strain the milk through a strainer fitted with a new disc of cotton wool at each milking.
- To empty water from cooler before washing.
- To rinse utensils in cold water. Thoroughly wash in hot water and soda and scald in boiling water or, preferably, sterilise with steam or by boiling in water.
- To stand utensils upside down to drain after cleaning and NOT to wipe them.

THIS ASSOCIATION APPEALS TO EVERY DAIRY FARMER TO PUT THESE PRECAUTIONS INTO OPERATION, BEING CONVINCED THAT IF PRODUCERS DO NOT TAKE MEANS TO ENSURE A CLEAN WHOLESOME MILK SUPPLY THE DEMAND FOR FRESH MILK WILL SERIOUSLY DIMINISH.

Correspondence on this subject will receive attention at the Offices of the Association, 28, Russell Square, London, W.C. 1.

# British Dairy Farmers' Association.

# Examination for THE B D E A DIPLOMA.

The Association grants to any Candidate who satisfactorily passes the necessary Examinations:---

#### A Diploma for Proficiency in the Science and Practice of Dairying.

Candidates for the Diploma must produce satisfactory evidence that they have received not less than two academic years' scientific and practical instruction at some recognised centre for Dairying Instruction, and have spent at least six months on a recognised Dairy Farm, and have taken part in the work of the Farm; such practical work to be in addition to the time spent at the centre for Dairying Instruction.

The Examination will extend over three or more days, and will test the Candidates' knowledge and experience of the Principles and Practice of Dairying and Dairy Farming.

For these purposes papers will be set upon the following subjects:--

- 1. Dairy Farming and Dairy Hygiene.
- 2. Dairying, including (a) Principles of Dairying; (b) Dairy Factory Management and Dairy Engineering.
- 3. Dairy Chemistry, including (a) General Chemistry and Physics; (b) Dairy Chemistry.
- 4. Dairy Bacteriology.
- 5. Dairy Book-keeping.

The Candidates will also be required to satisfy the Examiners with regard to their skill in Butter and Cheesemaking.

Candidates will be required to answer, in writing, sets of questions within a given time, and will also be examined *viva voce*. They will be expected to possess a sound knowledge of all the subjects included in the following Syllabus. Candidates, if required, must produce their note-books of Lectures and Demonstrations attended.

The Practical Examination will include Buttermaking, and also the preparation of one Hard-pressed Cheese, either Cheddar, Cheshire or Derby, to be selected by the Examiner, and one Blue-veined Cheese, either Stilton or Wensleydale, to be selected by the Candidate. The Diploma of the Association will be awarded to all Candidates who obtain not less than:—

- (a) 66 per cent. of the total possible marks for the Theoretical and Practical Examinations, and
- (b) 75 per cent. in the Practical Examinations.

The Diploma with Honours will be awarded to Candidates satisfying the following conditions:—

- (1) The total marks obtained shall be not less than 75 per cent. of the possible marks for the whole Examination.
- (2) The Candidate shall obtain not less than 70 per cent. of the possible marks for each and every written paper.
- (3) The Candidate shall obtain not less than 80 per cent. of the possible marks in each Practical Examination (Cheese and Buttermaking).

A silver medal will be awarded to the candidate who obtains the highest marks in the Diploma with Honours.

Examinations for the Diploma are held in the Autumn upon dates to be announced in the Agricultural and Dairy Press.

Entries will close 28 days prior to the date fixed for the commencement of the Examination.

The entry fee is 20s.

#### SYLLABUS OF SUBJECTS OF EXAMINATION.

#### 1.—DAIRY FARMING AND DAIRY HYGIENE.

#### (a) Dairy Farming.

Dairy Cattle.—Characteristics of different breeds and choice of dairy cattle. The milk yields of the more important breeds, and suitability for the milk trade, cream, butter and cheese production.

Foods and Feeding.—Summer and winter feeding of dairy cattle. Root and fodder crops. Green forage. Ensilage. Different kinds of food and their relative composition. The effect of food upon milk, butter and cheese. Special foods used for dairy stock. Preparation of food for dairy stock. Feeding of calves and young stock.

Housing and Management.—The situation, chief dimensions and construction of cow houses; ventilation, drainage, water supply. Systems of herd management, including management of herd bulls and in-calf heifers. Cattle breeding and grading up of dairy stock. Systems of calf rearing. The housing and management of young stock.

Milk Recording.—Systems and utilization of results. Details of official schemes.

Milk Production.—Factors influencing the yield and quality of milk. Milking by hand and machine. Location and equipment of farm dairies. The production and sale of clean milk. The treatment of milk from the cow to the milk factory or consumer.

Management of Pigs.—Characteristics of the more important breeds. Feeding of pigs. The management of sows and breeding stock. Farrowing, weaning, rearing and fattening of pigs. Systems of pig keeping, including outdoor management. The production of pork and bacon.

Soil and Cultivation.—Types of soils suitable for dairying. Fertility in soils. Soil cultivation. Manures and manuring of arable and grass land.

Plant Physiology.—Fruits and seeds of agricultural plants. Roots and shoots. Flower construction and seed formation. Experiments to demonstrate the fundimental facts of plant physiology.

Crop Management.—Rotations and systems of cropping. Cultivation, manuring and management of roots, forage and other crops used in dairying. Silage crops. Temporary and permanent pasture. Haymaking.

Farm Management.—Systems of dairy farming. The selection, stocking and equipment of typical farms. The organization of the farm and disposal of produce. Cost of milk production.

Dairy Economics.—The dairy industry of Great Britain and its relationship to Agriculture. The relative importance of the various products. The retail milk trade. Markets. Dairy organization and co-operation. Modern developments in the dairy industry. American, Colonial and Continental dairying.

#### (b) Dairy Hygiene.

Animal Physiology. -- General functions of the organs of the animal body. Breeding. Parturition. The structure of the udder and the process of milk secretion. Changes which food undergoes during digestion.

Veterinary Hygiene.—The more important diseases of dairy cattle and their remedies. The transmission and eradication of disease.

Milk Hygiene.—Sanitary conditions. Air space and ventilation. Suitability of water supply, temperature, &c. Methods of milking and handling of milk. Transportation. Prevention of contamination. Pasteurization. Sterilization. Legislation affecting milk production. Milk in relation to public health.

#### 2.—DAIRYING.

#### (a) Principles of Dairying.

Milk.—Condition on delivery. Use of utensils and appliances. Cooling of milk. Importance of cleanliness. Keeping of milk. Legal standards. Methods of utilization of milk and their comparative returns. Pasteurization of milk.

Milk Testing and Sampling.—The use of the Gerber and Babcock fat testers. Lactometer readings. Scale readings. Sample of milk for testing. Interpretation of results.

Cream.—Separators and their management. Different systems of cream raising and ripening of cream. Changes during ripening. Natural and artificial ripening and preparation and uses of starters. Preparation of cream for sale. Use of preservatives. Clotted cream.

Butter.—Churns and buttermaking appliances. Preparation of cream for churning. Washing and working butter. Butter milk. Packing and transmission of butter. Selection and keeping of butter. Salting. Use of preservatives. Characteristics of good butter and method of judging. Circumstances affecting the flavour, texture, colour and keeping qualities of butter. Potting butter for keeping. Causes of inferior butter. Conditions which affect the Butter yield.

Cheese.—Properties of milk suitable for Cheesemaking. Principals of manufacture. Appliances for cheesemaking. The making of the principal varieties of British, Colonial and Continental cheese from cream, whole milk and skim milk. Acidity of milk. Common tests for acidity. Use of rennet and its substitutes. Whey. Ripening and storage of cheese. Packing and sale of cheese. Making of cream and other soft cheese. Defects in cheese and their causes. Judging cheese. Composition of Cheese.

Dairy By-Products.—Composition, uses and value of skim milk, butter-milk and whey.

Records, Keeping of.

#### (b) Dairy Factory Management and Dairy Engineering.

Factory Practice.—Milk depôts and handling of factory milk. Systems of cooling and refrigeration. Pasteurization. Factory butter and cheese making. Milk powders. Condensed milk. Frozen milk. Ice cream. Dried casein. Fermented milk. Lactose and wheybutter. Margarine manufacture. Equipment of milk depôts, butter, cheese and dairy factories.

Factory Management.—Factory routine. Organization of labour. Handling of milk on arrival at the factory. Methods of dealing with the milk. Milk contracts. Dairy factory legislation.

Production of Power.—The various forms of energy as used for the production of power.

Machinery.—Care and management of engines and boilers. Power transmission. Construction and use of dairy factory machinery. Refrigerating machinery.

Dairy Appliances.—Appliances used in the production and handling of milk, butter and cheese making. Milk testing apparatus.

Buildings.—Situation, construction and drainage of creameries, milk depôts and dairy factories.

#### 3.—DAIRY CHEMISTRY.

#### (a) General Chemistry and Physics.

General Principles of Chemistry. The nature of elements and compound bodies. The different forms of matter, solid, liquid, gaseous. Specific gravity and instruments for determining it. Specific heat. Temperature and methods of measuring it. Thermometric scales. The influence of temperature in dairy operations. Physical and chemical changes involved in the following: Solution, precipitation, filtration, distillation, oxidation and reduction. Acids: Bases; Salts: their distinctive properties and quantitive estimation. Examination and identification of specimens and apparatus.

The Atmosphere.— Its constituents and impurities; its influence on dairy operations. Atmospheric pressure.

Water.- Constituents of pure and natural waters. The impurities of water and whence derived. The importance of a pure water supply in dairying.

Inorganic and Organic Chemistry. General knowledge of the elementary chemistry of the following substances and their compounds so far as met with in dairying: Potash, soda, ammonia, lime, phosphoric acid, alcohol, acetic acid, carbonic acid, butyric acid, lactic acid, albumen, casein, fats, milk-sugar, glycerine, pepsin, saponification of fats.

#### (b) Dairy Chemistry.

Chemistry of Milk.—The nature, composition, properties and chemical constituents of milk. Microscopical appearances presented by milk. The influence of feeding. The changes which occur in the keeping of milk, and how produced. The natural and artificial souring of milk. Rennet, its nature and use.

Milk Products.—Physical and chemical changes involved in the making and keeping of butter and in the manufacture and ripening of cheese. Separated milk. Condensed milk. Fermented milk. Synthetic milk. The use of preservatives.

Dairy Analysis.—Analytical methods, their theory and practices. A general knowledge of the methods employed in the chemical analysis of milk, butter, and cheese. Adulteration of milk, cream, butter, and cheese, the ways in which adulteration is practised, the changes in composition thereby produced, and a general knowledge of the methods employed in detecting the same.

Chemistry of Feeding.—The principal constituents of food materials and the functions they severally fulfil. The influence of food constituents on milk production. Assimilation and digestion. The manurial value of foods. Milk and milk products as foods.

#### 4.—DAIRY BACTERIOLOGY.

General Bacteriology.—Bacteria; their form, classification, growth and reproduction. The microscope and its use. Staining and microscopic examination of bacteria. Methods of isolation and cultivation. Preparation of culture media. Fermentations and chemical changes produced by bacteria. Enzymes and their action. Effects of heat, cold, sterilization, pasteurization, disinfectants and preservatives on bacteria and enzymes. Bacteriological examination of water supplies.

Bacteriology of Milk.—The changes produced by bacteria in milk. Useful forms and their functions. Harmful forms and their effects. Coagulation, discolouration, taints, &c. Bacteriological and other standards in relation to the cleanliness of milk.

Milk Products.—The bacteria concerned in the ripening of cream for butter making. "Starters": their preparation and management. The ripening of hard, soft, and blue-veined cheese. Bacteria injurious to milk products, including condensed and dried milk.

Dairy Mycology.—Moulds and yeasts in dairy practice. Their form, classification, growth and relation to dairy products.

#### 5.—BOOK-KEEPING.

General Principles.—Principles of double entry book-keeping. Use of diary, journal, cash book and ledger. Posting to ledger. Preparation of profit and loss account and balance sheet. Systems of valuation.

Farm Book-keeping.—Application of the principles of book-keeping to dairy farming and to the sale of milk in bulk or by retail. Milk ledgers and customers' accounts.

Factory Accounts.—Methods of book-keeping as applied to milk depôts and dairy factories.

 $\it Business\ Management.$  —General office work. Banking and use of cheques.

#### CERTIFICATE IN DAIRY FACTORY MANAGEMENT.

Candidates for the Certificate in Dairy Factory Management must fulfil the following conditions:—

- 1. They must possess an approved Diploma in Dairying.
- 2. They must have had six months' practical instruction at an approved dairy factory, or at an approved dairy factory school.
- 3. They must obtain 60 % of the possible marks in the examination for the Certificate in Dairy Factory Management.

#### Examination for the

#### CERTIFICATE IN DAIRY FACTORY MANAGEMENT.

- 1. Two papers will be set on the subjects outlined in the following syllabus.
- 2. Candidates will be examined orally in Factory Management with reference to the type of factory in which their practical training has been obtained.
- 3. Candidates must submit to the Examiners full notes of the work which has been carried out in the factories in which their practical experience has been obtained.

#### SYLLABUS OF EXAMINATION.

This Syllabus should not be viewed from a purely engineering standpoint, but students will be expected to have a general knowledge of the management of factory machinery: —

# Paper 1.—Planning, Equipment and Management of a Dairy Factory.

Dairy Factories.—Site, building materials, construction, laying of floors, lighting, ventilation, drainage, sanitation, disposal and treatment of sewage and factory waste. Space requirements for the common types and sizes of factories.

Water Supply.—Water requirements; sources of supply. Examination for quality and purity. Methods of purification. Suitability of water supplies for dairy purposes. Sites for wells. Construction of wells. Artesian wells. Pumps for deep and shallow wells. Airlift pumps.

Factory Equipment.—Artificial lighting and sources of power in the factory. Equipment required for various types of factories and approximate cost of same. The disposition and control of factory machinery.

Steam Plant.—Types of vertical and horizontal boilers and their relative advantages and disadvantages. Sizes of boilers required in dairy factories. Evaporating power of boilers. Setting and insulation. Cleaning out of boilers. Economical firing. Fuel used, e.g., coal, coke and wood. Cost and calorific value. Fuel consumption and cost of steam production. Allocation of steam supply to different purposes in the factory. Boiler smoke stacks and their construction. Boiler fittings, including donkey pumps and water injectors. Feed heaters. Methods of economising steam supply.

Factory Machinery.—Steam, gas and oil engines. Electric motors, turbines, water power, comparison of the various types and their relative efficiency. Construction and working of the various types. Cost of maintenance. Power requirements of the factory and the most suitable combinations of power when different sources of energy are available. The management and fitting up of machinery, including electric fittings. Adjustment of bearings. Packing of glands. Fixing of brackets, &c. Lubrication of machinery. Oil containers and filters. Lubricants. Lubrication of high-speed machinery. Oils and grease for shafting. Arrangement of machinery and methods of transmitting power. Belts, types and uses. Repairs to belting. Pulleys and gearing. Methods of increasing and reducing speed. Labour-saving devices. Tools required for a dairy factory.

Factory Plants.—Construction and operation of milk apparatus, including clarifiers, pasteurisers, separators, milk pumps, refrigerators, &c. Refrigerating machinery, CO<sub>2</sub> and ammonia. Methods of operation and management. Cold storage and brine cooling. Efficiency in the transfer of heat in heating and cooling apparatus. Methods of carrying out efficiency tests under different conditions and outputs. Factory appliances including cheese vats, holding vats, power churns, bottling machinery and other factory equipment. Their approximate cost and suitability of the various types. Methods of cleaning equipment, utensils and milk churns.

Factory Management.—Organization of labour. Business management. Book-keeping. Cost accounts. Profit and loss in manufacturing. Stock-taking and depreciation. Railway rates and conditions. Road transport. Systems and comparative costs. Advertising. Markets and sale of produce. Co-operative organization.

Factory Law.—Law as far as it affects the factory, the management and the produce. Factory and Workshops Act. Workmen's Compensation. Health Insurance. Employer's Liability and Trade Boards Acts. Industrial and Provident Societies Act. Rivers

Pollution Act. Sale of Foods and Drugs Act. Milk and Dairies Acts and other legislation as it affects the working of factories and the manufacture and sale of dairy produce.

# Paper 2.—Handling and Utilization of Milk and Milk Products.

Handling of Milk.—Purchase, collection and distribution of milk. Management of milk on arrival at the factory. Weighing, sampling, testing, recording and cleaning. Methods of paying for milk and cream

Utilization of Milk.—Methods of dealing with milk for sale for cream production, butter making, cheese making, and for the manufacture of other products.

Factory Products.—Preparation of cream for market. The manufacture and treatment of butter and cheese. Manufacture of condensed and powdered milk, casein and milk sugar, &c. Ice cream manufacture, &c. The utilization of by-products.

Pig-Keeping.—Feeding and management of pigs. The production of pork and bacon. Bacon curing.

The Entry Fee for each Candidate is £4 4s.

#### Examination for

#### CHEESEMAKING CERTIFICATE.

The Association grants to any Candidate who satisfactorily passes the necessary Examination—

# A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking.

The Examination, which will extend over two or more days, will test the Theoretical Knowledge of the Candidates and their Practical Skill in Cheese-making. Each Competitor will be required to answer, in writing, a set of questions within a given time, and will also be examined *viva voce*. On the same or following day a Practical Examination in Cheesemaking will take place.

Candidates will be considered to have passed the Examination if they obtain not less than 60 per cent. of the marks on each and every written paper and not less than 66 per cent. in the Practical test.

Candidates for this Certificate must, at the time of entry, produce satisfactory evidence that they have received at least twelve months' instruction in the Theory and Practice of Cheesemaking, of which at least six months must have been spent at a recognised centre for dairy instruction. They must possess a sound knowledge of the subjects included in the following Syllabus.

Candidates will be required to make one Hard-pressed Cheese, either Cheddar, Cheshire or Derby, to be selected by the Examiner, and one Blue-veined Cheese, either Stilton or Wensleydale, to be selected by the Candidate. They must also have a knowledge of the manufacture of other varieties of Hard-pressed Cheese and of Soft Cheese.

Candidates are at liberty to bring their own utensils for the Practical Examination if they wish to do so.

Examinations for Cheesemaking Certificates are held twice a year, viz., in the Spring and Autumn, upon dates announced in the Agricultural and Dairy Press.

Entries will close 28 days prior to the date fixed for the Examination.

The Entry Fee is 10s.

#### SYLLABUS.

- 1. Milk .- The Food Value of Milk; The Yield of Milk from various Breeds: Secretion of Milk and Structure of the Udder: Milking by Hand and Machine: Handling of Milk from Cow to Dairy: Importance of Cleanliness: Production of Highest Grade Milk: Cooling of Milk; Sale of Milk: Influence of Food on the Yield, Flavour and Fat Contents of Milk: Composition of Milk. Nature and Properties of its Constituents: Differences between Morning and Evening Milk and their Causes: Methods of Sampling and Simple Methods of Testing Milk, as the Lactometer, Creamometer, and Centrifugal Fat Testers: Testing for Acidity; Causes of Fermentation; Colostrum, its nature and properties; the Keeping of Dairy Records: the Handling of Evening's Milk for Cheesemaking: Properties of Milk suitable for Cheesemaking; Taints in Milk, their Causes, Effects and Remedies; Tests for such Taints; the Ripening of Milk for Cheesemaking; Methods and Reasons for Ripening; use of Natural and "Culture" Starters: Pasteurization of Milk: Chilled Milk: their subsequent use for Cheesemaking; Special Testing of Milk. Whey, and Curd requisite in a Cheese Dairy; Utilization of Dairy By-products.
- 2. Cheese.—Rennet: its Preparation, Properties, and Action upon Milk; Testing its Strength; Storage of Rennet; Substitutes for Rennet; Annatto; a General Knowledge of the Manufacture of the Principal Varieties of Hard-pressed, Blueveined, and Soft Cheeses, including the use of wood and metal tubs and jacketed vats; Methods of Scalding; the Development and Control of Acidity in Curd; Salting and Brining in Cheesemaking; Bandaging; Ripening and Storing of Hard-pressed, Blue-veined and Soft Cheeses; Defects in Cheese and their causes; Composition of Cheese; Composition and Utilization of Whey; the Manufacture of Whey Butter; the Equipment of a Cheese Dairy and its Cost; the care of Utensils; the Detailed Principles and Practice requisite for the Manufacture of one of the following types of Cheese:—
  - (a) A Hard-pressed British Cheese (not less than 25 lbs. weight).
  - (b) A Blue-veined British Cheese (not less than 10 lbs. weight.)

#### Examination for

#### BUTTERMAKING CERTIFICATE.

The Association grants to any Candidate who satisfactorily passes the necessary Examination—

# A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking.

The Examination, which will extend over two or more days, will test the Theoretical Knowledge of the Candidates and their Practical Skill in Buttermaking. Each Competitor will be required to answer, in writing, a set of questions within a given time, and will also be examined *viva voce*. On the same or following day a Practical Examination in Buttermaking will take place.

Candidates will be considered to have passed the Examination if they obtain not less than 60 per cent. on each and every written paper, and not less than 66 per cent. in the Practical Test.

Candidates for this Certificate must, at the time of entry, produce satisfactory evidence that they have received at least three months' instruction (not necessarily at a Dairy School) in the Theory and Practice of Buttermaking. They must possess a sound knowledge of the subjects included in the following Syllabus. They will be required to make Butter.

Candidates are at liberty to bring their own utensils for the Practical Examination if they wish to do so.

Examinations for Buttermaking Certificates are held twice a year, viz., in the Spring and Autumn, upon dates announced in the Agricultural and Dairy Press.

Entries will close 28 days prior to the date fixed for the Examination

The Entry Fee is 5s.

#### SYLLARUS.

- 1. Milk.—The Food Value of Milk; the Yield of Milk from various Breeds; Secretion of Milk and Structure of the Udder; Milking by Hand and Machine; Handling of Milk from cow to dairy; Importance of Cleanliness; Production of Highest Grade Milk; Cooling of Milk; Sale of Milk; Influence of Foods on the Yield, Flavour and Fat Contents of Milk; Composition of Milk, Nature and Properties of its constituents; Differences between Morning and Evening Milk and their causes; Methods of Sampling and Simple Methods of Testing Milk, as the Lactometer, Creamometer, and Centrifugal Fat Testers; Testing for Acidity; Causes of Fermentation; Colostrum, its nature and properties; the Keeping of Dairy Records.
- 2. Cream.—The Various Methods of Obtaining Cream; the Construction and Use of the Utensils employed; Separators, the Construction and Use of the various Types; Composition of Cream, Separated Milk, Skimmed Milk, and Buttermilk, with Simple Tests for Fat in same; the Ripening of Cream—Objects and Results; Changes during Ripening; Testing for Acidity; Natural and Artificial Ripening and Preparation of Starters; the Preparation of Cream for Churning; Preparation of Cream for Sale; Clotted Cream.
- 3. Butter.—The Various Methods of Obtaining Butter, including the Churning of Whole Milk; Utensils required, and the Preparation, Use, and Care of same; the Process of Butter Manufacture in all its details; Conditions which affect the Butter Yield; Circumstances affecting the Flavour, Texture, Colour, and Keeping Properties of Butter; Dry-salting and Curing of Butter; Faults in Butter and their causes; Composition and Properties of Good Butter; Composition and Causes of Inferior Butter; Methods of Judging Butter.

Particulars and Entry Forms for all Examinations may be obtained from

The SECRETARY,

British Dairy Farmers' Association, 28, Russell Square, London, W.C. 1.

#### **EXAMINATIONS**

AT

## LOCAL CENTRES.

In order to meet the convenience of Students at Dairy Schools, members of local Societies, and other persons, the Association will conduct Examinations for its Diplomas and Certificates at any place in the United Kingdom upon receiving satisfactory proof that the following conditions will be observed:—

That the School, Society, County Council, or other body requesting such an Examination to be held, undertake:—

- (1) To supply all necessary appliances and materials.
- (2) To pay the fees and expenses of the Examiners.
- (3) To supply the milk required free from preservatives and fit for Cheesemaking.

Copies of Question Papers set at recent Examinations may be obtained at 3d. per copy.

Applicants are requested to state whether Diploma, Cheese, or Butter questions are required.

Further particulars and Entry Forms for Students may be obtained from

The Secretary,

BRITISH DAIRY FARMERS' ASSOCIATION,

28, Russell Square, London, W.C.1.

#### EXAMINATION RESULTS, 1926.

- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE SOMERSET FARM INSTITUTE, CANNINGTON; ON MONDAY, TUESDAY, AND WEDNESDAY, MARCH 29th, 30th, and 31st.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Doris Bastable, Regmald W. Champion, Gertrude B. Flagg, Monica W. Fursman, Ralph Hoddinott, Lilian A. Oaten, Helen R. E. Pike, Elsie I. Speed, and James H. Wickham.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Reginald W. Champion, Gertrude B. Flagg, Monica W. Fursman, Lilian A. Oaten, Helen R. E. Pike, Kathleen J. Small, and Elsie I. Speed.
- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE DAIRY DEPARTMENT, COUNTY LABORATORIES, CHELMSFORD; ON FRIDAY, TUESDAY, AND WEDNESDAY, JUNE 11th, 15th, and 16th.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Alan G. Bateman, Phoebe F. Bond, Dorothy A. Brunning, Alma E. Cowell, Annie Hodge, Graham Horne, Eleanor W. Johnston, Fred Lodge, Hugh Macmillan, Anthony J. Marval, Frederic T. Oliver, Harold M. Penson, Beatrice Roberts, Joan V. Skelton, and Blanche I. Thompson.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Alan G. Bateman, Phobe F. Bond, Dorothy A. Brunning, Alma E. Cowell, Margaret G. Goody, Graham Horne, Eleanor W. Johnston, Anthony J. Marval and Harold M. Penson.
- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, JUNE 14TH, 15TH, 16TH, AND 17TH.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Henry R. H. Brown, Richard W. Channon, Norman C. Cooper, Winifred C. Davies, Morfydd V. M. Evans, Agnes A. Forster, Cecil Green, Margaret A. V. Griffiths, Reginald W. Hart, Alice Hassall, Hilda M. Hatchwell, Millicent A. Hunt, Constance M. Jenkins, Winifred M. Jolliffe, Ralph Keen, Doris S. Lindsay, Mabel G. Longhurst, Margaret Martin, John C. Mauger, Dorothy B. Menzies, Charles S. Miles, Dorothy E. Paice, Isabella A. M. Peel, Anthony T. G. Trew, Edith A. D. Turner, Sylvia L. Udell, and Elsie Waters.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Edith M. Barnard, Henry R. H. Brown, Richard W. Channon, Norman C. Cooper, Winifred C. Davies, Gladys Dawson, Agnes A. Forster, Helen G. Goodman, Cecil Green, Margaret A. V. Griffiths, Reginald W. Hart, Millicent A. Hunt, Winifred M. Jolliffe, Phyllis E. Kent, Margaret Martin, Charles S. Miles, Dorothy E. Paice, Isabella A. M. Peel, John R. Rowling, Viola C. Stamper, Anthony T. G. Drew, Edith A. D. Turner, Elsie Waters, and Elizabeth E. Willey.

- EXAMINATION FOR BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT STUDLEY COLLEGE STUDLEY; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 13th, 14th, and 15th.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Irene D. Beston, Norah M. Fisher, Edith E. Fosbery, Ruth Gilliat. Joan Kitching, Margaret A. Miller, Evelyn M. Mosley, and Jocelyn B. B. Robertshaw.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Margaret A. Hart, Kathleen R. C. Hodgson, Una A. Ridgway, Diana H. Style, and Kathleen L. Wigglesworth.
- EXAMINATION FOR DIPLOMA, BUTTERMAKING AND CHEESEMAKING CERTIFICATES AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY AND THURSDAY, SEPTEMBER 13th, 14th, 15th, and 16th.
- A Diploma, with Honours, and Silver Medal for Proficiency in the Science and Practice of Dairying to Margaret F. Griffiths, Charles S. Miles, Viola C. Stamper, and Elizabeth E. Willey.
- A Diploma and Silver Medal for Proficiency in the Science and Practice of Dairying to Nancy L. Baker, Kate Boyes, Henry R. H. Brown, Richard W Channon, Lucy H. Collishaw, Kate Cragg, Winifred C. Davies, Gladys Dawson, William Evans, Reginald T. J. Fleming, Agnes A. Forster, Lois C. Furnell, Sarah E. Gillson, Margaret G. Goody, Cecil Green, Margaret A. V. Griffiths, Reginald W. Hart, William F. Heathfield, Kathleen R. C. Hodgson, Millicent A. Hunt, Winifred M. Joliffe, Florence M. Lincoln, Flora I. McArthur, Dorothy Owen, Phyllis H. S. Read, Phyllis Rigby, Diana H. Style, John O. Thomas Reginald A. L. Walls, and Kathleen L. Wigglesworth.
- A Certificate of Merit for Proficiency in the Theory and Practice of Buttermaking to Ann E. Benjamin, Gwendoline M. Borlase, Olive A. Lewis, William O. Slatter, Phyllis B. Thorp, Graham D. Trevor, and Rose Ward.
- A Certificate of Merit for Proficiency in the Theory and Practice of Cheesemaking to Ann E. Benjamin, Morfydd V. M. Evans, Alice Hassall, Constance M. Jenkins, Olive A. Lewis, John C. Manger, William O. Slatter, Leonard A. Smith, Graham D. Trevor, Rose Ward, and Elizabeth A. Yardley.

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT SOMERSET FARM INSTITUTE, CANNINGTON; MONDAY, TUESDAY, AND WEDNESDAY, MARCH 29th, 30th, AND 31st, 1926.

#### EXAMINER .

ALEC TODD.

Three hours are allowed for this paper,

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined riva voce.

- 1. What would you consider to be a fair composition for a sample of milk, and what are the Government regulations regarding its composition?
- 2. Why is it advisable to cool milk before it is despatched by rail, and what is the best means of cooling?
- 3. How would you treat cream that is eventually to be sold retail?
- 4. What difference would you make in the treatment of cream for buttermaking in a small dairy where only two cows are kept, and in a large dairy where churning is done every day?
- 5. Describe the construction of a separator bowl, and explain why the cream is separated from the skim milk.
- 6. How would you test a sample of milk for fat and solids not fat?
- 7. What change has taken place in the ripening of cream, and what is responsible for bringing about this change?
- 8. What amount of butter would you expect to get from 10 gallons of reasonably good milk.
- 9. What are the chief factors in producing a good sample of butter?
- 10. What is the most profitable way of dealing with separated and butter-milk?

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT SOMERSET FARM INSTITUTE, CANNINGTON; MONDAY, TUESDAY, AND WEDNESDAY, MARCH 29TH, 30TH, AND 31st, 1926.

#### EXAMINER:

#### ALEC TODD.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. Explain the necessity of cleanliness in the cow shed, and in the general handling of milk intended for cheesemaking.
- 2. How would you test milk?
  - (a) For keeping qualities.
  - (b) For acidity.
  - (c) For coagulating properties.
- 3. How does the quality of milk used affect the yield and general palatability of the cheese made from it?
- 4. How would you treat evening's milk intended for cheesemaking?
  - (a) On an ordinary farm.
  - (b) In a cheese factory.
- 5. What is a starter and how would you use it?
- 6. Write a short description of what you know about rennet.
- 7. What do you consider is the essential difference in the making of Caerphilly cheese as compared with Cheddar, and explain why a Caerphilly is sold in a small flat shape?
- 8. What takes place in the ripening of a Wensleydale cheese?
- 9. How may a Cheddar cheese be seriously reduced in value through careless attention after it leaves the press?
- 10. What chief points in the making are responsible for the close creamy texture so essential in a good Cheddar?

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE DAIRY DEPARTMENT, COUNTY LABORATORIES, CHELMSFORD; ON FRIDAY, TUESDAY, AND WEDNESDAY, June 11th, 15th, and 16th, 1926.

EXAMINER: W. J. GRANT.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent, will pass.

Candidates will subsequently be examined viva voce.

- Give some idea of what in your opinion constitutes a farm well adapted to dairy farming.
- 2. Give a description of the condition in which cream is found in milk.
- 3. Give some information as to the points and character you would look for in a first classs dairy cow.
- 4. What method of feeding calves would you recommend upon a buttermaking farm? What are the objections raised against the sole use of separated milk in calf rearing.
- 5. State reasons for insisting upon absolute cleanliness in the dairy and its appointments.
- 6. Give a suitable scale of points for judging butter.
- 7. On what lines would you judge the merits of a cream separator?
- 8. State briefly what system of testing milk should be employed—
  - (a) Where milk is cold.
  - (b) Where used for buttermaking.
  - (c) Where used for cheesemaking.
- 9. Name the causes of variation in the composition of milk with which you are familiar.
- 10. State as fully as you can the changes which take place during the ripening of cream.

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE DAIRY DEPARTMENT, COUNTY LABORATORIES, CHELMSFORD; ON FRIDAY, TUESDAY, AND WEDNESDAY, June 11th, 15th, and 16th, 1926.

#### EXAMINER: W. J. GRANT.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- At what time of the year and for what reasons do you expect to make the finest cheese of the cream?
- 2. What foods give the best flavoured and best keeping cheese?
  In giving concentrated foods what would you recommend?
  Does the kind of land make any difference to your selection of foods?
- 3. What are the present prices of cheese? What scale of points would you draw up in judging cheese and how do you determine the marketable value of cheese?
- 4. Describe the process of milking a cow, how it should be carried out, the precautions that should be taken as to cleanliness, &c., of the cow's udder and teats and of milker's hands?
- 5. Do you consider the starter an important factor in connection with the manufacture of milk products? Give your reasons.
- Describe briefly the process of manufacturing one variety of hard pressed cheese with which you are acquainted.
- 7. Why is acidity so important in cheesemaking?
- In the manufacture of cheese describe the testing of milk, whey and curd for acidity, and give some standards of acidity appliable in Cheddar cheesemaking.
- 9. Which of the components of milk do we retain in butter and which in cheese?
- 10. To be successful as a manufacturer of cheese and butter it is necessary to have a supply of pure sound milk. What part of your management would require to be most carefully looked into to produce milk of this character?

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, JUNE 14th, 15th, 16th, and 17th, 1926.

#### EXAMINER:

#### W. BURKITT, B.Sc.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. What do you consider is an average composition for cows' milk? How may this composition vary, and what are the causes of these variations?
- 2. Describe briefly what in your opinion are the two best methods of obtaining cream from milk.
- 3. What are the utensils necessary for dealing with the milk from a herd of 30 cows, and how do these vary according to the different methods used for disposing of the milk?
- 4. If you had a trade for cream how would you prepare it to ensure a good product?
- 5. How are the colour, flavour and keeping qualities of butter influenced?
- 6. What do you mean by "the ripening of cream" and how is this best done?
- 7. Describe fully the various methods of salting butter.
- 8. What are the reasons for the presence of an excessive amount of fat in butter milk and separated milk, and how would you prevent this waste?
- 9. What influence have foodstuffs on the quantity and quality of butter?
- 10. Describe the best methods of testing for butterfat centrifugally.

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, JUNE 14th, 15th, 16th, and 17th, 1926.

# EXAMINER: MISS J. REID.

Three hours are allowed for this paper.

· Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

#### QUESTIONS.

# Ten questions only to be answered.

- 1. (a) State average percentage composition of cows' milk;
  - (b) Name and describe the ingredients which enter into the composition of cheese;
  - (c) State average composition of Cheddar cheese.
- 2. (a) Why is cleanliness so important in cheesemaking?;
  - (b) What are the chief sources of bacterial contamination of the milk, and how can such contamination be reduced to a minimum?
- Describe in detail your method of handling the evening's milk for Cheddar cheese from time of milking.
- 4. (a) How would you proceed to test milk to ascertain the specific gravity and percentage of fat?;
  - (b) What relation exists between the natural fat percentage and the yield of cheese?
- 5. (a) What do you understand by the term ripening of milk in cheesemaking?;
  - (b) Why is it so important to have the milk sufficiently ripened before rennetting?;
  - (c) What are the agents chiefly responsible for the ripening processes?

- 6. What are the objects in using a culture starter and how is the starter employed?
- 7. (a) What is meant by pasteurization of milk? Describe the process;
  - (b) Why is pasteurizing not generally practised in cheesemaking?
- 8. What are the conditions which influence the action of rennet on milk and the effects in cheesemaking of varying the quantity of rennet?
- 9. Given 200 gallons of milk with natural fat percentage 3.8, show your method of working out the quantity of ripe (heddar cheese you would expect to obtain. Compare the yield that would be obtained with milk, 3.4 percentage of fat. What are the main causes of loss in the making process?
- Describe the special features of a typical Stilton or Wensleydale, and explain how these qualities are obtained.
- 11. Why is a proper degree of acidity so essential at the various stages in the process of cheesemaking? What are the chief methods of controlling the acid fermentation throughout the process?
- 12. State utensils required and cost for a cheese-making dairy of 50 cows.

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE STUDLEY COLLEGE, WARWICKSHIRE; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 13th, 14th, and 15th, 1926.

#### EXAMINER:

#### MISS A. MATTHEWS.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent, will pass.

Candidates will subsequently be examined viva voce.

- State fully what precautions you would take (a) during milking;
   (b) the treatment of the milk;
   (c) the ripening of the cream in order to produce first grade butter.
- 2. What are the advantages of ripening cream and what would be the effect of churning (a) under ripened cream; (b) over ripened cream?
- State the principal causes which influence the yield and quality of milk.
- 4. How do you account for taints and bad flavours sometimes found in butter from private dairies during winter, and how would you avoid them?
- 5. What are the most important points you would consider in choosing a separator, and what precautions are necessary to ensure that it works properly?
- Give the composition of colostrum, and state why it should be avoided in butter making.
- Explain fully how you would prepare a starter from a pure culture, and when it should be ready for use.
- 8. Give a scale of points for judging a milking competition.
- 9. You are put in charge of a Dairy Farm where Grade "A" milk is produced. What precautions would you take to prevent contamination of the milk and utensils during, and between, milking periods?
- Describe shortly, two methods of pasteurizing milk for retail distribution.

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE STUDLEY COLLEGE, WARWICKSHIRE; ON TUESDAY, WEDNESDAY, AND THURSDAY, JULY 13th, 14th, and 15th, 1926.

#### EVAMINER .

#### MISS A. MATTHEWS.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together m order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

- 1. What faults would you expect to find in cheese made from milk produced under unclean conditions? What precautions would you take to counteract them?
- 2. What are the critical stages in the process of Cheddar cheese-making?
- 3. In what respects does milk produced in May differ from milk produced in October? State whether your methods of cheesemaking with these milks would vary, and why?
- 4. If you were given over-acid milk for cheesemaking what cheese would you prefer to make, and what difference would you make in the process of manufacture?
- 5. Compare the chief differences in the manufacture of Cheddar and Derby cheese; and state how long each take to ripen.
- 6. Explain fully how you would prepare a starter from a pure culture and when it should be ready for use.
- 7. Give a short description of method and equipment necessary for thorough cleansing and sterilising dairy utensils suitable for a dairy farm.
- 8. What is the cause of (a) soft, spongy curd; (b) dry, hard, and gritty curd in soft cheese, and give scale of points in judging Coulommier and Gervais cheese.
- 9. Describe fully two methods of pasteurizing milk suitable for use in a retail dairy business, and give a list of the plant and machinery required.
- 10. Give details of the manufacture and ripening of either Stilton or Wensleydale Cheese.

EXAMINATION FOR DIPLOMA AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 13th, 14th, 15th, and 16th, 1926.

#### EXAMINER:

T. J. DRAKELEY, Ph.D., F.J.C., F.C.S.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

### QUESTIONS.

#### CHEMISTRY AND BACTERIOLOGY.

- 1. How would you determine the percentage of nitrogen in a given sample of cheese, and explain what deductions you would make from the value so obtained?
- 2. What is meant by the "butter ratio"? How may it be calculated? What value would you expect for the butter ratio of a milk containing 3.7 per cent. of butter fat? If the actual ratio in practice is lower than that calculated, what explanations might be given to account for this fact?
- Describe the construction of a thermometer, and explain the value of this instrument in the dairy.
- 4. Write a short essay on one of the following (a) starters, (b) the atmosphere, (c) the water supply, (d) the lactometer and its use.
- 5. Write an account of the ways in which bacteria multiply and give examples. How do moulds and yeasts multiply?
- 6. What are the principal changes which take place during the ripening of cheese? What do you consider causes the changes you mention?
- 7. How would you determine whether a sample of milk contains bacillus coli? Of what value is this investigation?
- 8. How would you prepare glassware for use in bacteriological work?

  Illustrate your answer by reference to the sterilisation and subsequent storing of a pipette and a Petri dish.

EXAMINATION FOR DIPLOMA AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 13th, 14th, 15th, and 16th, 1926.

#### EXAMINERS:

T. J. Drakeley, Ph.D., F.I.C., F.C.S., and W. Burkitt, M.Sc.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

### DAIRY FARMING QUESTIONS.

- At what time of the year would you prefer to enter on a dairy farm? Give your reasons.
- 2. Which do you consider are the two chief arable crops in dairy farming? Describe their cultivation.
- 3. How would you compile a winter ration for a dairy cow in full milk? What are the underlying principles?
- 4. How do the following breeds differ:—(a) Shorthorn and Ayrshire;
  (b) Guernsey and Friesian?
- 5. Describe the rearing of a calf up to six months of age on a milk selling farm.
- 6. Write a short essay on "Abortion, its causes, losses and treatment."
- 7. If you keep pigs on a dairy farm how would you manage them, and feed them?
- 8. Describe briefly the chief ailments affecting poultry and how you would treat them.
- 9. What are the chief points to be considered in selecting a site for, and constructing, a dairy?
- 10. What do you mean by:—Catch cropping, white scour, milk records, escutcheon theory, wet grains, mammitis, warbles, frit fly, total solids?

EXAMINATION FOR DIPLOMA AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 13TH, 14TH, 15TH, AND 16TH, 1926.

Examiners: T. J. Drakeley, Ph.D., F.I.C., F.C.S., W. Burkitt, M.Sc., and Miss J. Reid.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and answers to Questions 1 to 6 should be fastened together in order in the left-hand corner. Answers to Questions 7 to 11 should be treated in the same way. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining

over 60 per cent. will pass.

Candidates will subsequently be examined viva voce.

# DAIRYING QUESTIONS.

- 1. What is meant by pasteurization? Describe the various methods of pasteurizing milk. Give the advantages and disadvantages of this system.
- Contrast the milk yielded by the various breeds of dairy cattle
  as found to-day in the British Isles, both as regards quantity
  and quality. Comment on any qualities which specially fit
  these milks for varying dairying purposes.
- Describe fully the process of the secretion of milk in the cow's udder.
- 4. What influence have the various cattle foods on the yield, flavour and quality of milk?
- 5. What records would you advise should be kept for dairying purposes?
- 6. Briefly explain the new "Milk and Dairies Order, 1926."
- 7. What are the recognised grades of milk on the British market?

  Describe each grade. What special precautions are necessary in the production of the highest grade?
- 8. Describe the effects of foods and feeding on the quantity and quality of milk and select a ration suitable for a cow 1,000 lbs. live weight in full milk in winter.

- 9. What are the main objects in "Milk Recording?" Describe an approved method of keeping the records and state the information an official record should contain.
- 10. Give average composition of whey from Cheddar cheesemaking and compare various methods of utilising this by-product (a) On the farm (b) At the factory.
- 11. Compare the qualities of a typical sample of Cheddar and Stilton cheese. How are the different qualities of the Stilton produced? What weight of ripe Stilton would you expect to obtain from 25 gallons of milk, average quality Shorthorn breed, and what are the more common errors in making resulting in loss of weight?

EXAMINATION FOR BUTTERMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 13TH, 14TH, 15TH, AND 16TH, 1926.

# EXAMINER: W. BURKITT, M.Sc.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Fach question carries the same number of marks, and Candidates gaining over per cent, will pass.

Candidates will subsequently be examined viva voce.

- What do you mean by the following terms:—Acidity of cream. Butter milk. A starter. Clotted cream?
- 2. How would you obtain the best quality of cream for buttermaking?
- 3. Why is it so very important to get a good grain in churning?
- 4. How do you ascertain the percentage of Total Solids in milk, and what percentage should there be?
- 5. Which do you consider the best breeds of cattle for buttermaking? Give reasons for your choice.
- 6. What is a cream separator, and what happens to the milk when it is separated?
- 7. How would you preserve butter for winter use, or for long keeping, when it is too cheap and uneconomical to market?
- 8. What are the causes of bad flavours in butter?
- 9. Which in your opinion is the best of type of milk strainer and milking pail, and why do you prefer them?
- 10. Describe the arrangement of a good modern butter dairy, giving a rough plan and dimensions, showing the position of the various appliances, and giving a list of the plant required.

EXAMINATION FOR CHEESEMAKING CERTIFICATE AT THE BRITISH DAIRY INSTITUTE, READING; ON MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY, SEPTEMBER 13th, 14th, 15th, and 16th, 1926.

# EXAMINER. MISS J. REID.

Three hours are allowed for this paper.

Candidates are requested to make their answers as brief as possible. Each answer should be written on a separate sheet of paper, and the sheets should be fastened together in order in the left-hand corner. The top sheet should bear the name of the Candidate.

Each question carries the same number of marks, and Candidates gaining over 60 per cent. will pass.

Candidates will subsequently be examined viva roce.

- 1. Mention the principal ingredients in cow's milk and describe the physical condition of each. Which of these ingredients are the more important from the cheesemakers' point of view and why?
- 2. What conditions influence the percentage composition of milk?

  Describe the effect of each condition you mention.
- Describe your method of cooling the evening's milk in hard pressed cheesemaking, and the influence of the temperature you adopt on the bacterial contents of the cheese.
- 4. What are the functions of rennet in cheesemaking and the conditions most favourable for its action? Why is it so important to add the rennet in cheesemaking at the correct degree of acidity in milk?
- 5. When making a quick ripening cheese, and a slow ripening one, what different conditions are required?
- 6. Describe in detail your method of propagating "The Starter" and state the more common causes of deterioration in starters.
- 7. What are the more common defects in Cheddar cheese and how may these defects be avoided?
- 8. How long do you press a Cheddar cheese, what amount of weight used, and what would be the effect of under pressing?
- 9. Describe the special features of a typical Stilton or Wensleydale and explain how these qualities are obtained.
- 10. Do you require any special precautions in the treatment of milk for soft cheesemaking and what amount of acidity do you require before renneting?

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